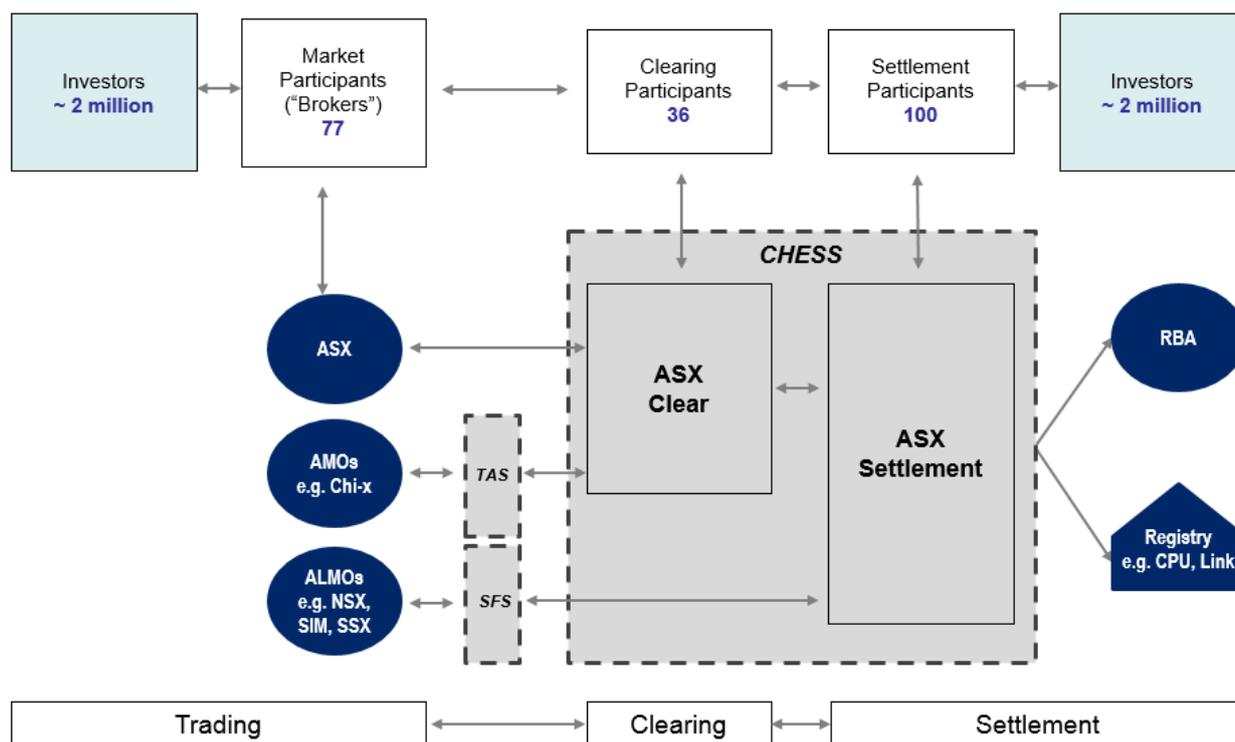


BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2A	
Topic	Cash market clearing and settlement services - Operational performance
Date	11 October 2017
Purpose of this paper	To report on key performance metrics for ASX's clearing and settlement services.

OVERVIEW

Market Structure Overview



The clearing and settlement of equities performs a critical role in the operation of Australia's financial markets, helping to reduce counterparty and systemic risk, and provide transaction efficiency and certainty for end investors.

Core processes that provide these benefits include novation, netting and settlement.

Novation

Through a contractual process known as novation, ASX Clear becomes the seller to every buyer and the buyer to every seller, making it liable for completing all cleared transactions on the relevant market.

Novation performs two important functions:

- it replaces the clearing participants' credit exposures to other clearing participants by substituting the clearing house as the central counterparty; and
- it maximises capital efficiency for clearing participants by permitting a single net exposure to be calculated and collateralised between the clearing house and each clearing participant.

Through novation, ASX Clear provides protection to non-defaulting clearing participants (and, indirectly, their clients) from the inability of a defaulting clearing participant to meet its obligations.

A key metric for monitoring novation is the percentage of on and off market trading that is novated.

Trades submitted for clearing and settlement by any market operator are verified prior to registration by ASX Clear. If the verification conditions are not satisfied then trades are rejected. Once a trade is registered it is novated. Novation is deemed to be effective from the matching of bid/offer (on market trades) or recording of the trade (reported trades) for all trade execution venues.

Netting

ASX Clear is approved as a 'netting market', and ASX Settlement is an 'approved netting arrangement', for the purposes of the Payment Systems and Netting Act. This gives legal certainty to the netting of settlement obligations. Settlement on a multilateral net basis maximises market efficiency by reducing participant transaction and funding costs.

A key metric for monitoring netting is the percentage by which novated value is netted down for settlement. This metric is termed "netting efficiency".

Settlement

ASX's model for settlement maximises efficiency, while minimising the risk of settlement failure. It does this by simultaneously transferring the legal ownership of shares and facilitating the transfer of money for those shares. This is done through a Model 3 multilateral net batch settlement mechanism with irrevocable settlement finality at the end of the processing cycle. The transfer of money occurs across the Exchange Settlement Accounts of payment providers in the RBA's Information and Transfer System (RITS).

A key metric for monitoring settlement is the percentage of scheduled settlement that successfully settles (i.e. the opposite of the "fail rate"). This metric is termed "settlement efficiency".

Service availability

ASX's critical processes of novation, netting and settlement and are supported in ASX's core system CHES. It is critical for market operations, that CHES remains stable and available for processing. A key metric for monitoring systems availability is the percentage of systems uptime as measured against target availability times. The service availability target for CHES is 99.80%.

For the September 2017 quarter¹, the average monthly system availability was 100% for CHES. The average monthly availability of CHES has been 99.99% between November 2011 and August 2017.

¹ Up to 31 August 2017

Trade Acceptance Service

ASX Clear and ASX Settlement's Trade Acceptance Service (TAS) provides a mechanism for Chi-X to submit trades into CHES. The CHES system performs the clearing and settlement functions.

The Trade Acceptance Service availability target for TAS is 99.80% (the same as CHES).

For the September 2017 quarter², the average monthly system availability was 100% for the TAS. The average monthly availability of the TAS has been 99.99% between November 2011 and August 2017 (which is the same as CHES).

Reporting on clearing and settlement service performance

The key metrics noted above on novation, netting efficiency and settlement efficiency for the September 2017 quarter are reported in Attachment A. They are also supported by charts demonstrating a longer reporting period in Attachment B.

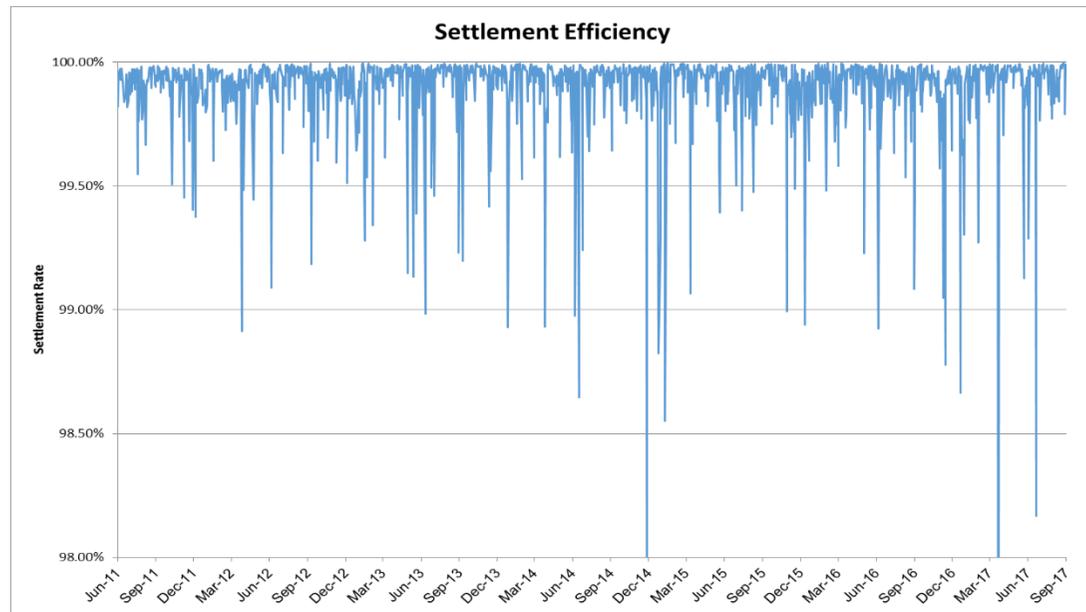
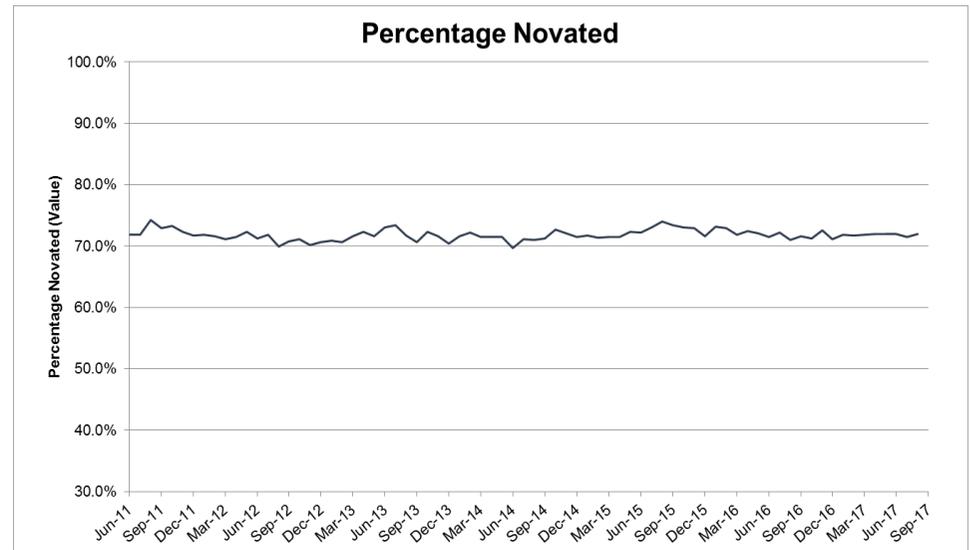
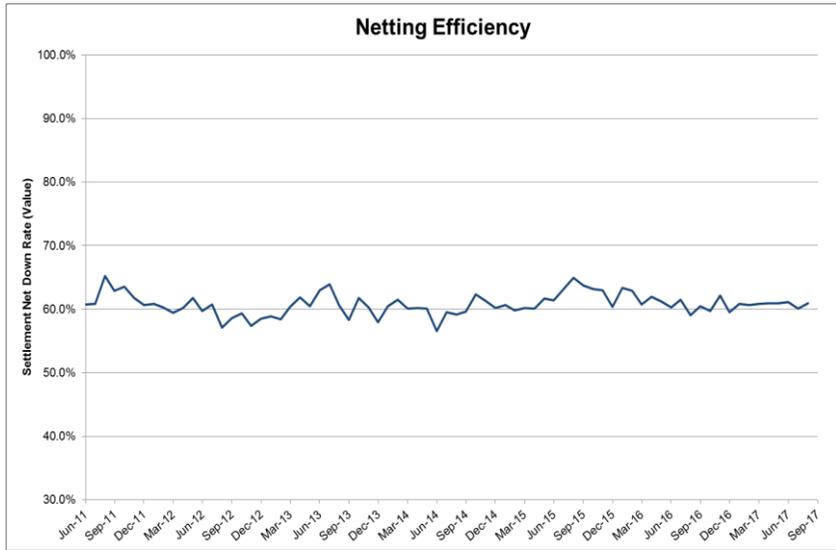
² Up to 31 August 2017

ATTACHMENT A – SUMMARY METRICS RELATING TO THE PERFORMANCE OF ASX’S CLEARING AND SETTLEMENT SERVICES

	September 2017 Quarter³	June 2017 Quarter	March 2017 Quarter
System Availability (CHES)	100%	100%	100%
System Availability (TAS)	100%	100%	100%
Total Trades Accepted (ASX)	50,688,386	72,787,681	68,291,241
Total Trades Rejected (ASX)	4	12	4
Total Trades Accepted (Chi-X)	19,558,132	27,136,357	23,179,261
Total Trades Rejected (Chi-X)	0	0	0
Total Settlements (SSX)	0	3	9
Total Value of Settlements (SSX)	\$0	\$0	\$0
Total Settlements (NSX)	388	649	573
Total Value of Settlements (NSX)	\$922,401.45	\$1,539,537	\$2,041,890
Daily Average Traded Value (On and Off Market)	\$6.3 billion	\$6.8 billion	\$6.2 billion
Daily Average Cleared Value	\$4.55 billion	\$4.92 billion	\$4.45 billion
Percentage Novated	71.7%	72%	71.8%
Daily Average Cleared Value Post-Netting	\$1.8 billion	\$1.92 billion	\$1.74 billion
Netting Efficiency	60.6%	61%	60.8%
Daily Average Settled Value (Including Non-Novated)	\$9 billion	\$9.9 billion	\$9.2 billion
Settlement Efficiency	99.94%	99.89%	99.83%

³ Up to 31 August 2017

ATTACHMENT B – PERFORMANCE OF ASX'S CLEARING AND SETTLEMENT SERVICES FROM JUNE 2011 TO AUGUST 2017



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2B	
Topic	Customer Service Survey Results
Date	11 October 2017
Purpose of this paper	Jane Peter, GM Customer Experience will present a summary of the outcomes of the ASX Customer Survey

CUSTOMER SURVEY OVERVIEW

ASX has completed its annual Customer Satisfaction Survey. The survey was conducted to measure our progress on engagement and alignment with customers and to measure our performance on day-to-day service levels. This survey was conducted by an independent provider.

The survey was delivered in the form of an online survey to a broad range of customers to measure the customer experience of those who had interacted with the ASX in the past 12 months.

The feedback indicates that we are making progress and customers are recognising changes in the way we do things at ASX. Customers have given a clear indication of where we are doing well and the key opportunities for the ASX to improve the service it provides. The feedback is consistent with previous years while recognising the progress we have made in many areas.

This paper gives a summary of the outcomes and actions that will be taken as a result of this survey.

OVERALL RESULTS AND ACTIONS

The survey results saw significant improvements in customer satisfaction and reflect the increased focus and effort by ASX to improve the service we provide our customers. In the comments, customers acknowledge considerable improvements from ASX over the past 12 months, areas customers highlight as having contributed to the service improvement include:

- The ongoing support of the Technical Account Management team
- The delivery of NTP
- Improvements made to our operating processes
- The strong personal relationships with people across ASX

Customers also gave consistent feedback in areas where more work can be done to continue the progress we have made. These areas include:

- Simplify key operational and technology processes
- Improve responsiveness of support and transparency in communication when issues arise
- Enhance online systems to make it easier to find information

In response to the survey the following areas have been identified and action plans are in progress:

- Review communication channels and instigate additional one-on-one engagement with customers to improve clarity and ensure focus on key areas of interest
- Develop a whole of customer focus to improve strategic relationships

-
- Talk further with our customers to understand the pain points in processes across their entire business and the solutions available. This is in addition to the CHES replacement consultation currently underway.
 - Review our service levels to improve consistency and responsiveness
 - Improve our online experiences and access to information

NEXT STEPS

ASX management are currently sharing the outcomes of the survey across ASX's customer advisory committees and regular face-to-face meetings. These conversations will also provide further insight into the results and our roadmap will then be refined to ensure the right focus.

The feedback we have received through the survey and our existing initiatives give us confidence that we are on the right path. They focus on the core components our customers have identified, ensuring we get the basics right first. While we have a lot of work ahead, we expect a positive outcome from the changes we will make.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3A	
Topic	Markets in Financial Instruments Directive (MIFID) II
Date	11 October 2017
Purpose of this paper	To brief Members on matters arising from MIFID II implementation

OVERVIEW

ASX will provide members with a verbal briefing on ASX activities in relation to:

- MIFID II equivalence applications
 - share trading obligation;
 - derivatives trading obligation;
 - post-trade transparency regime; and
 - commodities position limits regime
- National Number Agency activities
 - International Securities Identification Number (ISIN), Classification of Financial Instruments (CFI), and Financial Instrument Short Name (FISN) identifiers for MIFID II transaction reporting; and
 - facilitating Legal Entity Identifier (LEI) reporting to the Association of National Numbering Agencies (ANNA).

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3B	
Topic	Response from the Boards of ASX Clear and ASX Settlement
Date	11 October 2017
Purpose of this paper	To provide a response to the Business Committee recommendation from the 3 August 2017 meeting.

OVERVIEW

At the meeting held on 3 August 2017, the Business Committee requested that ASX Management present a recommendation to the ASX Boards relating to the participation of Approved Market Operators in the CHES Replacement Working Groups.

The Boards of ASX Clear and ASX Settlement considered and accepted the recommendation put forward by the Business Committee. Their formal response to the Business Committee is provided in Attachment A.

ATTACHMENTS

Attachment A – Letter to the Business Committee from the Boards of ASX Clear and ASX Settlement



16 August 2017

Mr Peter Hiom
Chairman
ASX Code of Practice Business Committee

By email Peter.Hiom@asx.com.au

Dear Peter

BUSINESS COMMITTEE RECOMMENDATION

I refer to the recommendation of the Business Committee to the Boards of ASX Clear and ASX Settlement (together, the **CS Boards**) made at the Committee's meeting on 3 August 2017.

The Business Committee's recommendation was that all Approved Market Operators (or 'AMOs', i.e. listing and trading venues which use 'clearing and settlement arrangements' provided by ASX Clear and ASX Settlement (**CS Facilities**)) should be invited to participate in the CHES Replacement Working Groups convened by the CS Facilities.

The CS Boards have considered and accepted the recommendation. On behalf of the CS Boards I wish to thank Business Committee members for their input.

I note that AMOs' attendance at the CHES Replacement Working Groups will be in addition to the AMO Working Group convened by the CS Facilities from May 2017 to specifically address AMOs' requirements for CHES Replacement.

Representation of AMOs on the CHES Replacement Working Groups will adhere to the same principles applied to other stakeholder groups, in particular that individuals representing AMOs must have appropriate expertise in the topics to be discussed at the working groups.

I have copied this letter to the Australian Securities and Investments Commission, the Reserve Bank and Treasury for information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rob Woods', with a long horizontal flourish extending to the right.

Rob Woods
Chairman, ASX Clear Pty Limited and ASX Settlement Pty Limited

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3C	
Topic	Annual Cash Equities Clearing and Settlement Reports
Date	11 October 2017
Purpose of this paper	To provide the Business Committee with ASX’s annual compliance reports pursuant to the Regulatory Expectations.

COMPLIANCE REPORTS

In accordance with the Regulatory Expectations for Conduct in Operating Cash Equity Clearing and Settlement Services in Australia (Regulatory Expectations) and ASX’s Code of Practice, ASX is required to publish annually:

- a Cash Equities Clearing and Settlement Service Developments Report; and
- a report prepared by an external auditor on ASX’s compliance with the Regulatory Expectations.

ANNUAL CASH EQUITIES CLEARING AND SETTLEMENT SERVICE DEVELOPMENT REPORT

In the Code of Practice, ASX committed to report annually on the cash equities clearing and settlement service developments and investment projects progressed, and how it has taken into consideration the views of users.

This is the first annual cash equities clearing and settlement service development report published since the Council of Financial Regulators (CFR) released the Regulatory Expectations in October 2016. The report is focused on ASX’s consultation with industry on the CHES Replacement Project.

The Annual Cash Equities Clearing and Settlement Service Developments Report is provided in Attachment A.

ANNUAL EXTERNAL REGULATORY EXPECTATIONS AUDIT

The purpose of this paper is to update the Business Committee on the audit performed by PwC on ASX’s compliance with the Regulatory Expectations for Conduct in Operating Cash Equity Clearing and Settlement Services in Australia (Regulatory Expectations), and to provide the Business Committee with the finalised assurance report prepared by PwC.

Background

In the Regulatory Expectations, there is a requirement for ASX to annually commission an external audit by an independent assurance firm of its governance, pricing and access arrangements benchmarked against the Regulatory Expectations. This is the first audit of ASX’s compliance with the Regulatory Expectations since CFR released the Regulatory Expectations in October 2016.

Prior to the release of the Regulatory Expectations, ASX has been subject to an independent annual audit in relation to its compliance with the Code of Practice for Cash Equities Clearing and Settlement in Australia for financial years 2014, 2015 and 2016.

Audit

PwC undertook a reasonable assurance engagement in relation to ASX's compliance with the Regulatory Expectations in accordance with the *Australian Standard on Assurance Engagement 3100 – Compliance Engagements* issued by AAASB for the period from 12 October 2016 to 30 June 2017. PwC assessed ASX's compliance with the Regulatory Expectations by reference to the Compliance Framework developed by ASX, which comprises the ASX Code of Practice and related policies and procedures.

Audit findings

The assurance report sets out PwC's unqualified audit opinion that "ASX has complied, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework for the period from 12 October 2016 to 30 June 2017."

PwC have made two recommendations to enhance ASX's compliance with the Regulatory Expectations:

1. For ASX to document its procedure to annually review the composition of the business committee; and
2. For ASX's Regulatory Expectations Compliance Framework document to be adopted by the respective business owners, and be subject to annual review by Regulatory Assurance and reported to the Audit and Risk Committee.

Consultation with the Business Committee

In accordance with the Regulatory Expectations, ASX consulted the Business Committee on the draft terms of reference for the audit at its May meeting prior to engaging PwC. ASX also provided CFR with a copy of the terms of reference prior to engaging PwC.

As part of the audit, PwC sought feedback from members of the Business Committee on the operation and effectiveness of the Committee in providing a mechanism for user input into ASX's governance arrangements. Relevant feedback received from members of the Business Committee was incorporated in the scope of the audit, that is, the feedback relevant to ASX's compliance with the Regulatory Expectations was tested by PwC.

The Assurance Report is provided in Attachment B.

ATTACHMENTS

Attachment A – Annual Cash Equities Clearing and Settlement Service Developments Report

Attachment B – PwC Reasonable Assurance Report on ASX's Compliance with the Regulatory Expectations



Cash Equity Clearing & Settlement Services Developments

Annual Report

October 2017



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Cash Equity Clearing & Settlement Service Developments

Annual Report

October 2017

Executive Summary

This annual report has been prepared to explain the service developments and investment projects ASX has undertaken during the 12 month period to 30 June 2017.

The most significant investment project has been the CHES Replacement work and associated comprehensive consultation activities with users. This has been a significant undertaking that has been the focus of ASX over the past 12 months.

In response to user feedback to ASX's initial CHES Replacement consultation process, a number of business requirements and technical specification forums were created. These included the Technical Committee's work on ISO 20022 messaging, six working groups on business requirements, AMO working groups and technology demonstrations.

ASX also continued work with Digital Asset, a software development company specialising in distributed ledger technology (DLT) on the development and testing of a system, which may be chosen as the technology to replace CHES.

A number of smaller but important service enhancements have been made in the period and these are outlined below.

1. CHES replacement project

The successful delivery of a CHES Replacement project requires ASX to complete several large streams of work. Three key streams of work commenced or were ongoing in the reporting period:

1. Comprehensive consultation with users on their business requirements for the system to replace CHES.
2. Specifying the content and format of the global standard ISO 20022 messages to replace proprietary CHES messages.
3. Continuing the technology investigation of the suitability of distributed ledger technology (DLT) as a replacement to underpin the replacement of CHES.

In addition to consulting and capturing input from users on their business requirements, ASX also documented detailed business, functional and non-functional requirements for the core activities of clearing, settlement and other post-trade services.

1.1 Business Requirements

ASX identified business, functional and non-functional requirements and associated tests for a subset of core clearing and settlement services performed by CHES today to allow assessment of the capabilities of DLT against 'real-world' scenarios.

All requirements have been written in a solution agnostic manner as per accepted best software development practice. This ensures that these requirements are reusable and can be applied to any appropriate technology.

The business requirement inputs gathered from users and ISO 20022 message specifications are being developed in parallel to DLT system build activities. These requirements can be accommodated with low effort into the final technology solution due to agile software development practices and the flexibility of the system design.



Requirements have been grouped under the following categories:

- Actor (Users)
- Asset (Securities)
- Trade Registration
- Netting
- Settlement Preparation
- Settlements
- Default Management
- Margin and Risk
- Holding Management
- System Administration
- Reporting
- Billing
- RTGS
- Reference Data
- ASX Integration
- Mfunds
- Corporate Actions

1.2 Stakeholder Engagement

ASX has developed a comprehensive program for continued engagement with key stakeholders on the CHES Replacement project. The cash equity clearing and settlement service impacts many stakeholders either directly or indirectly, including issuers and their agents (share registries), investors (holders), market operators, participants, payment banks, system vendors, regulators, industry associations and representative groups.

ASX has sought input from stakeholders in two key areas – business requirements for the replacement of CHES, and on the adoption of the ISO 20022 standard to replace CHES proprietary messaging.

Consultation on CHES Replacement Business Requirements

ASX received significant feedback to the September 2016 consultation paper on CHES Replacement and a supplementary questionnaire released in December 2016. In response, ASX established two formal processes to discuss and capture input on users' business requirements, a series of business requirement working groups and an ISO 20022 technical committee.

Business Requirements Working Group

The business requirements working group has been structured into 6 topic categories. A broad cross-section of industry experts representing issuers, investors, participants, custodians, share registries and market operators actively participate in these workshops.

The 6 working group topic categories include:

1. Account Structures and Participant Models
2. Corporate Actions
3. Transfers, Conversions & Data Migrations
4. Settlement Enhancements
5. Data storage, delivery and reporting
6. Non-Functional Requirements

As at 30 June 2017, five workshops across the first two categories (account structures, participant models and corporate actions) had been held producing several business requirements.

ISO 20022 and the Technical Committee

Respondents sought more detailed information on ISO 20022 messages, including how CHES messages will be translated into the ISO 20022 standard, and what transition arrangements will be available to facilitate implementation.

In response to the feedback, ASX has:

- a) Committed to adopt ISO 20022 messaging standards for the CHES replacement system, regardless of which technology is chosen for the replacement system.
- b) Provided a [dedicated section of the CHES Replacement web page](#) to the ISO 20022 work stream, including a free eBook for users on ISO 20022.



- c) Formed the ISO 20022 Technical Committee - further information on the ISO 20022 Technical Committee is provided below.
- d) Committed to provide updates to the Business Committee on the progress of the ISO 20022 Technical Committee in working through the detailed mapping and implementation of ISO 20022 messages.
- e) Engaged SWIFT consultancy expertise to assist with the CHES to ISO 20022 message development and lodgement to the International Standards Organisation.

Approved Market Operator Working Group

ASX created an Approved Market Operator (AMO) working group to provide AMOs with a regular meeting to discuss their requirements for clearing, settlement and other services provided by ASX.

Quarterly Webinars

ASX provided quarterly updates on the CHES Replacement project by webinar. This approach was successful during the transition to T+2 Settlement as a way to reach a broad audience and provide the opportunity for the audience to ask questions of the presenters.

DLT demonstrations

In 2016 ASX developed a dedicated demonstration space called 'acceler8' located in the ASX offices in Sydney. This was used to showcase the DLT prototype and explain the conceptual technology architecture. During the period ASX provided 61 demonstrations to 407 attendees from numerous participants and user groups.

Business Committee

The key forum for ASX to engage with its cash equities clearing and settlement customers is the Business Committee. This comprises senior representatives from clearing and settlement participants, approved market operators and relevant industry organisations who are stakeholders in ASX's cash equities clearing and settlement services.

Meetings of the Business Committee are held quarterly, with more regular meetings convened during 2017 to focus on CHES Replacement. ASX has provided updates to the Business Committee on the project progress, summaries of stakeholder engagement and key milestones, and the discussions and output from the working groups. The Business Committee also receives reports and minutes from the ISO 20022 Technical Committee.

All stakeholders are supportive of continued engagement with ASX.

1.3 Technology Build and Assessment

ASX selected Digital Asset to develop DLT based clearing and settlement functionality to enable ASX to assess the suitability of the technology and the vendor for the replacement of CHES.

Based on a selection of functional and non-functional business requirements, in November 2016 Digital Asset commenced the build of an enterprise grade system suitable for the above purpose.

For the reporting period, Digital Asset released several incremental versions of their software and this allowed ASX to progressively test the software against its requirements.



2. Other service enhancements

During the reporting period (FY17) ASX has progressed a number of incremental enhancements to CHES or associated processes and reports. The key enhancements related to core clearing and settlement services¹ are summarised below.

2.1 Enhancement 1 – TFN messaging

The Australian Government's Privacy Act regulates the collection, storage, use, disclosure, security and disposal of individuals' Tax File Number (TFN) information.

CHES messaging (for example message 533) enables participants to pass their client's TFNs to the relevant registry/issuer.

While CHES does not store the TFN, ASX made an enhancement to further improve the security of this information during its transmission through the messaging service.

2.2 Enhancement 2 – Payment Providers report

In June 2017 ASX automated the extraction and compilation of data from CHES to support the provision of bi-annual reports to payment providers. This facilitates the regular monitoring of payment facility performance, on both an individual payment provider and anonymised aggregate market basis.

During the T+2 Settlement project ASX consulted with the Equity Settlement Payment Providers Sub Committee of the Australian Payments Network (APCA) about delaying the CHES batch settlement start time from 10.30am to 11.30am. This change reduced the period available for payment providers to authorise their payment obligations in the settlement batch.

To support the consultation on, and analysis of, the impact of the change on payment providers, ASX analysed CHES data and prepared manual reports to demonstrate the elapsed time for each payment provider's submission of Payment Funds Obligation Authorisations (CHES message 311) after the receipt of "Payment" Participant Funds Obligation (CHES message 310). The analysis demonstrated that the reduction in the timeframes could be accommodated and would not negatively impact the payment providers.

Post the introduction of T+2 Settlement, ASX agreed to provide the reports on a bi-annual basis to each payment provider and to the relevant APCA committee. The monthly extraction of the data from CHES has now been automated to ensure timely and efficient delivery of the reports. ASX provides each payment provider with a report on their own performance and the average across the market. The anonymised total market view is also shared with the Equity Settlement Payment Providers Sub Committee.

2.3 Enhancement 3 – Approved Market Operator (AMO) Operational Procedures

ASX and the AMOs have mutually agreed Operational Procedures for the maintenance of issuers and their products to allow for the provision of clearing and settlement services by ASX to the AMOs. ASX regularly reviews the Operational Procedures for AMOs and liaises bilaterally with AMOs on any proposed changes, or in turn reviews any operational change requests received from AMOs.

During the period the procedures were updated to include terminology changes, updates to ASX contact and assistance information, and other minor amendments. The most recent procedural change, mutually agreed with the AMOs, was to reduce the time taken to process CHES subregister changes associated with an issuer delisting from one Australian exchange and re-listing on another Australian exchange. The change reduces the time from a potential four week period to one week. The AMOs provided ASX with positive feedback on this change. While the changes were negotiated and drafted during the review period, they took effect in August 2017.

¹ Excluding the ASX mFund service



2.4 Enhancement 4 – Approval and facilitation to clear and settle transferable custody receipts

ASX provides services to AMOs in Australia, including Chi-X Australia. The services are available with regard to 'Approved Financial Products', i.e. a financial product that is quoted on a listing market and approved for clearing and settlement in accordance with the ASX Settlement and ASX Clear Operating Rules.

During the report period ASX continued work on a request submitted by Chi-X Australia via the Trade Acceptance Service change request process to facilitate the clearing and settlement of a new class of financial instrument known as transferable custody receipts. Chi-X Australia released a consultation paper on 31 March 2016 in relation to its plans to quote and trade transferable custody receipts, to be known as TraCRs on that market.

The key activities associated with the request included:

- Clearability eligibility assessment – ASX Clear is required to undertake a clearability assessment for any new class of product to ensure it meets the clearing house's requirements.
- Establishment of a dedicated Security type in ASX systems including CHES, and ASX reference data:
 - On 4 October 2016 ASX informed ReferencePoint Master List customers that security type 08 would be renamed "Transferable Custody Receipt" to represent ownership in the shares of a foreign company trading on a local, domestic stock exchange. ASX subsequently advised that the change would be made effective 23 January 2017.
 - On 22 December 2016 ASX advised customers that test files related to security type 08 were available. On 30 January 2017 ASX advised customers that additional securities information test files regarding security type 08 were available, including 4 corporate action event type test files.
- The availability of testing for Chi-X Australia on the TAS test environment. The new security type with sample test securities was made available on Chi-X Australia's test kit on 1 December 2016, with testing continuing to be made available since that date.
- Amendment of the AMO Operational Procedures to include the additional security type. The operational processes associated with this security type largely follow the normal conventions described in the existing AMO Operational Procedures.
- No changes have been required in CHES to accommodate the new security, as CHES will recognise this security type. To date one customer has requested the addition of TraCR test securities to their own CHES UAT test kit. A number of test securities have also been available in the CHES Release Test Environment (RTE) since June 2017.
- ASX has adhered to the TAS change request procedures and met all agreed milestones with Chi-X Australia.

ASX has been operationally ready to support clearing and settlement of the transferable custody receipts since January 2017, for Chi-X or any other AMO that is seeking to quote, clear and settle this security type.

2.5 Other enhancements

During the report period ASX has delivered a number of enhancements internal to ASX to improve its own operational and regulatory processes and reporting capabilities.

3. Future planned enhancements

CHES enhancements

ASX publishes a quarterly Market Notice to advise of technology upgrade releases planned for the next 6 to 12 months across the various customer facing platforms, including CHES. The known future upgrade releases planned for CHES are outlined below.

ISIN Standardisation

ASX proposes a system upgrade to CHES in Q1 2018 to allow for the standardisation of ISIN information. This is part of a broader project in progress by ASX to ensure adherence to the Association of National Numbering Agencies coding standards for ISIN (International Securities Identification Number), LEI (Legal Entity Identifier), CFI (Classification of



Financial Instrument), and FISN (Financial Instrument Short Name). Technical and Business go-live is expected in February 2018, with further information to be provided to the market.

The impact on CHESS and its users is confined to the ISIN, where ASX (as the National Numbering Agency for Australia) will introduce a new ISIN format (i.e. the content of an ISIN field) applicable to new financial instruments issued post implementation. The change will not apply to existing ISINs other than for those entities that undergo an issuer code change, or change in domicile to Australia. The new format will no longer include the ASX code (security code), and will continue to comply with ISO ISIN standard 6166. The ISIN for each financial instrument is included in various ASX data products and CHESS messages as an informational data item. CHESS users are not impacted by the system upgrade, and are not required to perform any testing or technical changes. ASX customers would be required to check their own systems and processes for the usage of ISIN to ensure the new format can be accommodated.

On 16 September 2013, ASX released a consultation paper entitled *International Securities Identification Numbers: Removing the ASX Code* which proposed changes to the methodology for allocating ISINs issued by ASX over listed equity and other products, through its role as National Numbering Agency (NNA) for Australia.

ASX received a total of three written submissions to the consultation, including two confidential submissions.

All respondents were of view that the new methodology proposed should not have a material impact to their internal operations, systems and development effort required to meet the change. Consultation feedback also suggested that an appropriate period, such as six months prior notification, should be provided before the change was affected. Accordingly, ASX agreed that a six month notification period is appropriate and reasonable.

On 17 September 2017 ASX advised that the target implementation period would be in Q1 2018 and provided an overview of the scope of the change and the impact on ASX market information products.



To the Directors
ASX Settlement Pty Limited and ASX Clear Pty Limited (ASX)

Reasonable assurance report on compliance with the Regulatory Expectations as represented in ASX's Compliance Framework

Independent Assurance Report

Opinion

We have undertaken a reasonable assurance engagement in relation to ASX's compliance, in all material respects, for the period from 12 October 2016 to 30 June 2017, with:

- the Regulatory Expectations for the Conduct of Cash Equity Clearing and Settlement Services in Australia issued by the Council of Financial Regulators (CFR) in October 2016 (the Regulatory Expectations) as represented in ASX's Compliance Framework which comprises the ASX Code of Practice and related policies and procedures listed in Appendix B (together the Compliance Framework).

In our opinion, ASX has complied, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework for the period from 12 October 2016 to 30 June 2017.

Description and findings of the reasonable assurance procedures

Appendix A to this report includes description of the reasonable assurance procedures performed, detailed findings and recommendations from those procedures. Appendix B contains ASX's Compliance Framework and supporting documents.

Basis for Opinion

We conducted our engagement in accordance with Standard on Assurance Engagements ASAE 3100 *Compliance Engagements* issued by the Auditing and Assurance Standards Board.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

ASX's Responsibilities

ASX is responsible for:

- a) The compliance activity undertaken to meet the Regulatory Expectations; and
- b) Identification of risks that threaten the compliance with the Regulatory Expectations identified above being met and controls which will mitigate those risks and monitor ongoing compliance.

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Our Independence and Quality Control

We have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

In accordance with Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements*, the firm maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Assurance Practitioner's Responsibilities

Our responsibility is to express an opinion on ASX's compliance, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework for the period from 12 October 2016 to 30 June 2017. ASAE 3100 requires that we plan and perform our procedures to obtain reasonable assurance about whether ASX has complied, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework, for the period from 12 October 2016 to 30 June 2017.

An assurance engagement to report on ASX's compliance with the Regulatory Expectations involves performing procedures to obtain evidence about the compliance activity and controls implemented to meet the Regulatory Expectations. The procedures selected depend on our judgement, including the identification and assessment of risks of material non-compliance with the Regulatory Expectations as represented in the Compliance Framework.

Inherent Limitations

Because of the inherent limitations of an assurance engagement, together with the inherent limitations of any internal control structure it is possible that fraud, error, or non-compliance with compliance requirements may occur and not be detected. Additionally, there is a certain level of subjectivity within the subject matter as represented in the Regulatory Expectations. A reasonable assurance engagement throughout the period from 12 October 2016 to 30 June 2017 does not provide assurance on whether compliance with the Regulatory Expectations will continue in the future.

Other procedure - Consultation with Business Committee members

As agreed in our engagement letter signed on 8 August 2017, we have performed consultation with Business Committee members as required by the External audit Terms of Reference. Appendix C to this report provides further information on these other procedures.

Matters relating to the electronic presentation of ASX's Compliance Framework

This assurance report relates to the compliance of ASX with the Regulatory Expectations as represented in ASX's Compliance Framework for the period 12 October 2016 to 30 June 2017 (compliance subject matter). ASX is responsible for their website and its integrity and we do not accept responsibility for any changes that may have occurred to the compliance subject matter information or ASX's Compliance Framework since they were presented on ASX's website as at the date of this report.



We have not been engaged to report on the integrity of this website. The assurance report refers only to ASX's Compliance Framework applicable as at the date of this report. It does not provide an opinion on any other information which may have been hyperlinked to/from ASX's Compliance Framework or to/from ASX's website.

Restricted Use

This report was prepared for use by the Directors of ASX to assist them in addressing the Regulatory Expectations. We disclaim any assumption of responsibility for any reliance on this report to any person other than the Directors of ASX, or for any purpose other than that for which it was prepared.

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A handwritten signature in blue ink, appearing to read 'M Lunn', written over a faint horizontal line.

Matthew Lunn
Partner

Sydney
13 September 2017



Description and findings of the reasonable assurance procedures

The table below includes a description of the reasonable assurance procedures performed, detailed findings and recommendations from those procedures.

Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>1.a) ASX should make an explicit public commitment to investing promptly and efficiently in the design, operation and development of the core Clearing and Settlement infrastructure for the Australian cash equity market, including the Clearing House Electronic Sub-register System (CHES) and any future replacement system. This commitment should be supported by governance processes that enable users to provide input on the setting of the investment strategy. Investments should ensure that, to the extent reasonably practicable, the performance, resilience, security and functionality of the core Clearing and Settlement infrastructure meet the needs of users, recognising the diversity and differing needs of users. At a minimum, the core Clearing and Settlement infrastructure should accommodate internationally accepted communication procedures and standards.</p>	<ol style="list-style-type: none"> 1. Examined the Code of Practice published on ASX's website. 2. Enquired with management about the governance process that allows Business Committee members to provide input into the strategy. Examined the minutes of ASX Clear Pty Limited and ASX Settlement Pty Limited Boards (together ASX Boards). 3. Examined the Business Committee and Technical Committee minutes on a sample basis for the period from 12 October 2016 to 30 June 2017 as published on ASX's website as well as the latest Business Committee Charter dated May 2017. 4. Examined the ASX's Replacement of CHES for Equity Post-Trade Services: Business Requirements Consultation Paper dated 10 September 2016 for consideration of performance, resilience, security and functionality of the core Clearing and Settlement infrastructure as well as the related public summary. 5. Examined the June 2017 Business Committee minutes to understand whether internationally accepted communication procedures and standards are being considered within the Clearing and Settlement infrastructure. 	<ol style="list-style-type: none"> 1. The Code of Practice includes an explicit public commitment: "ASX will invest in the ongoing operation and development of the core cash equities clearing and settlement infrastructure promptly and efficiently. Such investments will seek to meet the needs of users, recognising the diversity and differing needs of users." 2. The governance process includes the Business Committee, the Technical Committee, a number of working groups (currently the six listed below) as well as a number of ad hoc public consultations. Business Committee papers include summaries (including attendees) of the Technical Committee, the public consultations and the working groups. We also observed that the ASX Boards receive a summary of the Business Committee meetings including recommendations made by Business Committee members. The six working groups (the Working Groups) comprise: <ul style="list-style-type: none"> - Account structures and participant models; - Corporate actions; - Transfers, conversion and data migrations; - Settlement enhancements; - Data storage, delivery and reporting ; and - Non-functional requirements. 3. The Business Committee charter outlines the role of the Business Committee and the procedures for sharing agendas, supporting papers and minutes of meetings. Management informed us that the March 2017 Business Committee meeting included a session to allow Business Committee members to provide input into the strategy. This included an agenda item relating to the replacement of CHES (section 4 c). We observed that the length of the meeting was extended from one and a half to four hours which we understand was to allow sufficient time for this particular agenda item. We also noted in the minutes a summary of the discussion held on this agenda item during this meeting. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
		<p>4. The non-confidential submissions from Clearing and Settlement participants and a combined summary of their responses are published on ASX's website in the CHES Replacement – Public Consultation Feedback Summary. The guiding principles in the Consultation Paper include "Accessibility; Ease of integration and global interoperability; Availability, reliability and performance; Privacy and security; and Operational efficiencies."</p> <p>5. The “user engagement plan” covers the replacement of CHES and implementation of Distributed Ledger Technology (DLT)/Blockchain, as well as ISO 20022 Financial Services - universal financial industry message scheme Technical Committee meetings. We understand the introduction of ISO 20022 is a long term strategic initiative to adopt internationally accepted communication procedures and standards.</p>	
<p>1.b) ASX should ensure that the membership of its user governance arrangements is representative of the user base of its Clearing and Settlement services, and that members are able to have strong input into the agenda and format of meetings or other user governance mechanisms and the setting of priorities</p>	<p>1. Examined the composition of the Business Committee on ASX's website. Obtained ASX's Clearing and Settlement customer list and compared it against the Business Committee members' composition to identify how ASX considers different users' needs.</p> <p>2. Enquired about ASX's procedure to review the Business Committee composition on a periodic basis.</p> <p>3. Obtained and Examined on a sample basis the emails sent to Business Committee members with agenda, supporting papers and minutes of Business Committee meetings.</p>	<p>1. The Business Committee comprises 24 members, including clearing participants, settlement participants, three other market operators and independent associations such as the Australian Financial Markets Association (AFMA) and Stockbrokers and Financial Advisers Association (SAFAA). Participants include large institutional brokers and smaller retail brokers.</p> <p>2. We understand from management that the Business Committee composition is reviewed on an annual basis to ensure it is representative of ASX's users' base. The latest change was the addition of the Chief Executive Officer of AFMA as from the March 2017 Business Committee meeting.</p> <p>3. For the sample selected, Business Committee meeting agendas and associated papers were sent to Business Committee members on average one month and one week respectively before the Business Committee meeting dates which is consistent with the Business Committee Charter. We understand per discussion with management that the Business Committee members can use this notice period to provide input into the agenda</p> <p>The draft minutes are circulated by emails to the Business Committee members for their review and comment.</p> <p>The agendas we examined included a standing item for discussion of previous meetings' minutes with Business Committee members.</p> <p>Through discussion with ASX management we understand that users are able to provide input into the priorities through the</p>	<p>We understand that there is currently no documentation on the procedure in place to review and approve the composition of the Business Committee. We recommend management documents this procedure.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
		<p>Business Committee, Technical Committee, Working Groups and public consultations as described in observation 2 and 4 under section 1a). In addition, we understand the Working Groups' objective is to obtain input on the business requirements for the replacement of CHES from customers and other relevant stakeholders.</p> <p>The Working Groups are focused on identifying and defining opportunities for improvements to post-trade processes and services, which could potentially be addressed through the replacement of CHES. The input from the Working Groups on the business requirements also includes industry prioritisation of specific business requirements for the scope of "day 1" implementation of the system that replaces CHES. A summary of the outcome of those Working Groups was included in the minutes of the Business Committee meetings we examined.</p> <p>The Business Committee papers we examined also included a forward work program, mostly focussed on CHES replacement and a statement to invite Business Committee members to bring forward any other clearing and settlement matters that the Business Committee should consider.</p>	
<p>1.c) ASX should demonstrate that it has had regard to the views of members in setting the terms of reference for the external audits of its governance, pricing and access arrangements carried out in accordance with the Regulatory Expectations. This may take the form of members' non-objection of the proposed terms of reference. These terms of reference may change following any review of the Regulatory Expectations.</p>	<ol style="list-style-type: none"> 1. Examined the Terms of Reference and the Business Committee minutes dated 4 May 2017. 2. Examined the email communications between ASX and the CFR in relation to the Terms of Reference. 	<ol style="list-style-type: none"> 1. The Regulatory Expectations External Audit Terms of Reference were presented in draft to the Business Committee for their review during the May 2017 Business Committee meeting and were included in the Business Committee papers sent to members ahead of the meeting. We noted in section 4b) of the minutes that the Chair of the Business Committee asked for comments on the Terms of Reference and that no comments were provided by the Business Committee. 2. ASX obtained feedback in an email dated 31 May 2017 from the CFR (through ASIC) on the scope of the engagement. This feedback did not include any request for modification of the Terms of Reference. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>1.d) ASX should maintain accountability arrangements that provide for regular public attestations as to the effectiveness of its interactions with users. For example, the following arrangements would be appropriate:</p> <p>i) ASX's user governance mechanisms operate on a 'comply or explain' basis; that is, the relevant Board would take actions in accordance with recommendations from the user governance mechanisms, or else explain why such actions had not been taken.</p> <p>ii) ASX report, on at least an annual basis, the service developments and investment projects that it has progressed and how it has taken into consideration the views of users.</p>	<ol style="list-style-type: none"> Examined a sample of Business Committee member recommendations from Business Committee meeting minutes and assessed if they were addressed in subsequent Business Committee meeting minutes. Enquired with management on the progress of the report in relation to the service developments and investment projects and examined the August 2017 Business Committee agenda and papers. 	<ol style="list-style-type: none"> We noted through examination of the Business Committee minutes that users provided recommendations to which the ASX Boards have responded in writing in subsequent Business Committee papers. Those responses were made on a "comply or explain basis". Based on discussion with management, we understand that the annual report on service developments and investment projects will be presented to the Business Committee in October 2017 and management is not aware of any issues as at the date of this report. One of the items in the work forward plan included in the August Business Committee papers relates to the presentation of the "Annual Report on investments & service enhancements" to the Business Committee in October 2017. 	Not applicable.
<p>1.e) ASX should formally commit to retaining a Board structure for ASX Clear and ASX Settlement that comprises a minimum of 50 per cent of non-executive directors that are also independent of ASX Limited, and where a subset of these independent directors can form a quorum.</p>	<ol style="list-style-type: none"> Examined the Code of Practice. Examined the composition and resumes of ASX Limited, ASX Clear Pty Limited and ASX Settlement Pty Limited Directors as published on ASX's website. Examined ASX's November 2016 Board Charter as published on ASX's website. Examined a sample of ASX's Boards meeting minutes. 	<ol style="list-style-type: none"> The Code of Practice includes an explicit public commitment to retain a Board structure for ASX Clear Pty Limited and ASX Settlement Pty Limited with a minimum of 50 per cent of non-executive directors that are also not Directors of ASX Limited. The Code of Practice also provides that ASX ensures non-executive directors can form a quorum to be able to consider competitive sensitive information provided by another market operator. Three out of the six Directors on the ASX Clear Pty Limited and ASX Settlement Pty Limited Boards are non-executive directors that are also not Directors of ASX Limited's Board. We understand from management that any change in Board member is subject to ASIC's approval. We noted no change in the composition of the Boards for the period under review. ASX's Directors discuss at each Board meeting individual Directors' interest and potential conflicts. <p>The ASX Boards Charter was circulated and discussed during the November 2016 ASX Boards' meeting.</p>	Not applicable.



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>1.f) ASX should establish governance structures and reporting lines at the management and operational levels that promote access to its Clearing and Settlement services on commercial, transparent and non-discriminatory terms. These arrangements should ensure that the interests of users are upheld in accordance with Regulatory Expectation 3. This may be demonstrated, for example, through the key performance indicators set for relevant management.</p>	<ol style="list-style-type: none"> 1. Enquired about ASX's governance and reporting lines for Clearing and Settlement services. 2. Enquired with management and Examined a sample of ASX's senior executives' Key Performance Indicators (KPIs) and a sample of their team's KPIs. 	<ol style="list-style-type: none"> 1. ASX senior management have direct reporting lines which are segregated based on their functions. In particular, business (Line 1) and compliance (Line 2) report to different executive personnel. ASX's Line 2 have produced an informal mapping document to assist us in our assurance engagement. This document reconciles the Regulatory Expectations with ASX's Code of Practice, policies, procedures and controls. Each Regulatory Expectation has been mapped with the relevant requirement of the Code of Practice, ASX's controls, a conclusion on compliance with each Regulatory Expectation and a reference to supporting evidence. ASX has concluded that it complies with all Regulatory Expectations. 2. Examined the KPIs for a sample of senior executives and noted that these include a KPI relating to the provision of access to ASX Clearing and Settlement services on commercial, transparent and non-discriminatory terms as per the regulatory expectations. The KPIs also include objectives to provide access to specific Clearing and Settlement users, e.g. Approved Listing Market Operators (ALMOs), Approved Market Operators (AMOs) and other Clearing and Settlement participants. 	<p>We recommend that the Line 1 team owns the Regulatory Expectations internal mapping document and develops it into a formal, comprehensive document. This should be subject to independent review and challenge by the Line 2 compliance team. Further, the outcome of these reviews should be reported to the Audit and Risk Committee.</p>
<p>2.a) ASX should ensure that all prices of individually unbundled Clearing and Settlement services, including rebates, revenue-sharing arrangements and discounts applicable to the use of these services:</p> <ol style="list-style-type: none"> i) are transparent to all users of the services ii) do not discriminate in favour of ASX-affiliated entities, except to the extent that the efficient cost of providing the same service to another party was higher iii) are made available to stakeholders in a form such that the impact of pricing changes can be readily understood. 	<ol style="list-style-type: none"> 1. Examined the Clearing, Settlement and Issuer Administration Service Schedule of Fees dated 1 July 2016, 17 October 2016 and 1 December 2016. 2. Selected a sample of ASX invoices issued to various users to test whether Clearing and Settlement prices charged are in accordance with prices published on ASX's website for the period 12 October 2016 to 30 June 2017. 	<ol style="list-style-type: none"> 1. ASX prices are transparent as they are published on its website. The detail of the fees for ASX services is also included in the invoices sent. There has not been any price change during the period from 12 October 2016 to 30 June 2017. The previous price change related to a 10% reduction on the transaction clearing fee for equities effective 1 July 2016. 2. The prices for the Clearing and Settlement services as included in the sample of invoices tested were consistent with the prices published on ASX's website Clearing, Settlement and Issuer Administration Service Schedule of Fees effective from 12 October 2016 to 30 June 2017. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>2.b) ASX should maintain an appropriate method for determining the prices of its Clearing and Settlement services so as to generate expected revenue that reflects the efficient costs of providing those services, including a return on investment commensurate with the commercial risks involved.</p>	<ol style="list-style-type: none"> 1. Examined the Enterprise Wide Pricing Framework to ensure that it includes documentation on the method for determining the prices of its Clearing and Settlement services. 2. Examined the 2016 and 2017 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified. 3. Examined the 2014 independent benchmarking report and the April 2016 note issued by Oxera on ASX Clearing and Settlement Services' costs. 	<ol style="list-style-type: none"> 1. ASX's method to determine the prices of its Clearing and Settlement services is documented in its Enterprise Wide Pricing Framework. This framework was recently updated following a review by ASX executive management and internal audit in January 2017. 2. ASX cash market clearing and settlement management income statement is subject to an annual external audit under Australian Auditing Standards. PwC issued unqualified audit reports for the cash market clearing and settlement management income statement for the years ended 30 June 2016 and 30 June 2017. The notes to these audited reports include ASX methodology for the internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. 3. In 2014 ASX commissioned Oxera, an independent economics consultancy firm, to benchmark ASX Clearing and Settlement services' costs against the costs of using the services provided by financial market infrastructure providers in other countries. The overall conclusion was that "when taking into account the scale of trading, the costs of post-trading services in Australia are in line with the costs of similar services provided in financial centres of a comparable size." In 2016, ASX commissioned Oxera to review the prevailing price schedules for the financial market infrastructures included in the 2014 analysis to assess whether post-trading fees had changed, and whether the conclusion from the 2014 analysis would still hold based on the current pricing schedules. The April 2016 Oxera note concluded that, overall, ASX's clearing fees remain in line with those central counterparty clearing houses operating at a comparable scale. In relation to settlement costs, the 2016 note indicated that pricing changes in other markets were less prevalent and were limited to fee increases by three settlement facilities. The note also stated that ASX has not increased its clearing or settlement fees since the 2014 analysis. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>2.c) ASX should make an explicit public commitment that any changes in the prices of its Clearing and Settlement services will not be implemented in a way that would materially shift revenue streams between aspects of its trading, clearing and settlement services.</p>	<ol style="list-style-type: none"> 1. Examined the Code of Practice published on ASX's website. 2. Examined the listing of Clearing and Settlement prices effective from October 2016 to June 2017. 3. Examined the 2016 and 2017 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified. 	<ol style="list-style-type: none"> 1. The Code of Practice includes an explicit public commitment that "ASX Clear and ASX Settlement will not implement price changes with the purpose of materially shifting revenue streams between other trading, clearing and settlement services." 2. There were no changes to Clearing and Settlement prices during the period from 12 October 2016 to 30 June 2017. 3. Refer to section 2.b) above for the results of PwC's audits of the cash market clearing and settlement management income statement. 	<p>Not applicable.</p>
<p>2.d) ASX should publish any increases in its Clearing and Settlement fee schedules along with an attestation justifying their reasonableness. For the most material such increases, this attestation would be expected to refer to relevant metrics and other evidence, such as the calculated return on equity, benchmarked price lists, or an independent review of how ASX's cash equity Clearing and Settlement fees compare with those of Clearing and Settlement facilities in other markets.</p>	<ol style="list-style-type: none"> 1. Examined the listing of Clearing and Settlement prices effective from October 2016 to June 2017. 	<ol style="list-style-type: none"> 1. There were no changes to Clearing and Settlement prices during the period from 12 October 2016 to 30 June 2017. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>2.e) ASX should maintain an appropriate model for the internal allocation of costs, including the cost of allocated capital, as well as policies to govern the transfer of prices between the relevant ASX Group entities. Compliance with the model and policies would be expected to be subject to internal audit review. The model and policies should be based on reasonable cost allocation principles. For example:</p> <p>i) where possible, costs should be directly allocated to the service(s) which give rise to those costs</p> <p>ii) shared costs should be allocated based on appropriate and transparent metrics.</p>	<ol style="list-style-type: none"> 1. Examined ASX's internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. 2. Examined the 2016 and 2017 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified. 3. Examined email correspondence between ASX and ASIC in relation to the requirement for an internal audit of the internal allocation cost. 	<ol style="list-style-type: none"> 1. ASX's internal cost allocation and transfer pricing policy is published on ASX's website and includes ASX's internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. 2. Refer to section 2.b) above for the results of PwC's audit of the cash market clearing and settlement management income statement. 3. ASIC confirmed in writing on behalf of the CFR that the audit requirement of section 2.e) is satisfied by the external audit of management income statements performed by PwC. 	Not applicable.
<p>2.f) ASX should negotiate commercially and in good faith with unaffiliated market operators and Clearing and Settlement facilities regarding fees and other financial contributions charged for any extensions to its monopoly Clearing and Settlement services, and in particular those provided under the existing Trade Acceptance Service and the Settlement Facilitation Service.</p>	<ol style="list-style-type: none"> 1. Enquired with management about extensions to existing services entered into during the period from 12 October 2016 to 30 June 2017. 	<ol style="list-style-type: none"> 1. We understand from management that there was no extension to existing services and accordingly no such fee negotiation occurred during the period under review. The ASX schedule of fees, as referenced under section 2a), is included on ASX's website and includes prices for all Clearing and Settlement services, including those rendered to AMOs and ALMOs. 	Not applicable.



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>3.a) ASX should have objectives for its Clearing and Settlement services that include an explicit public overarching commitment to supporting access to its Clearing and Settlement services on commercial, transparent and non-discriminatory terms. ASX should maintain standard user terms and conditions that are consistent with these objectives, taking into account the legitimate business interests of ASX and any parties seeking access to its Clearing and Settlement services.</p>	<ol style="list-style-type: none"> 1. Examined the Code of Practice as published on ASX's website. 2. Examined ASX's Trade Acceptance Service (TAS) and Settlement Facilitation Service (SFS) terms and conditions as published on ASX's website. 3. Examined ASX's Operating Rules as published on ASX's website as well as the internal procedure for amending Operating Rules. 	<ol style="list-style-type: none"> 1. The Code of Practice includes the following commitment: "ASX is committed to providing access to clearing and settlement services on transparent and non-discriminatory terms, and will respond to requests for access in a fair and timely manner." 2. TAS and SFS agreements contain standards user terms and conditions that provide for ASX to grant non-discriminatory access to its clearing and settlement services: <ol style="list-style-type: none"> i) of comparable quality to the services provided to ASX ii) in accordance with applicable laws, rules and procedures iii) without discriminating in relation to clearing and settlement participants on the basis of where the trade was effected or reported 3. ASX Operating rules incorporate the standard terms and conditions applicable to all users of ASX's Clearing and Settlement Services. ASX's internal procedure for amending operating Rules include a requirement to consult with ASIC prior to any change. 	<p>Not applicable.</p>
<p>3.b) Service level agreements should commit ASX to providing access to its Clearing and Settlement services for unaffiliated market operators and Clearing and Settlement facilities on operational and commercial terms and service levels that are materially equivalent to those that apply to ASX as a market operator or Clearing and Settlement facility.</p>	<ol style="list-style-type: none"> 1. Examined ASX's TAS and SFS terms and conditions as published on ASX's website and listed in section 3a). 	<ol style="list-style-type: none"> 1. TAS and SFS agreements contain standards user terms and conditions that provide for ASX to grant non-discriminatory access to its clearing and settlement services: <ol style="list-style-type: none"> i) of comparable quality to the services provided to ASX ii) in accordance with applicable laws, rules and procedures iii) without discriminating in relation to clearing and settlement participants on the basis of where the trade was effected or reported. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>3.c) ASX should publish and adhere to protocols for dealing fairly and in a timely manner with requests for access. These protocols should include reasonable timeframes for responding to enquiries and arrangements for dealing with disputes. Nothing in the protocols should affect either party's right to refer a dispute to arbitration by the ACCC (Australian Competition and Consumer Commission) once the arbitration regime is implemented.</p>	<ol style="list-style-type: none"> 1. Examined ASX's Operating Rules, TAS and SFS terms and conditions as published on ASX's website and listed in section 3a). 2. Examined TAS and SFS agreement as published on ASX's website to assess whether the template includes a protocol for dealing with disputes. 3. Examined AMO and ALMO access request procedures as published on ASX's website. 4. Examined ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols as published on ASX's website. 	<ol style="list-style-type: none"> 1. Refer to section 3a) above for review of the standards user terms and conditions that provide for ASX to grant non-discriminatory access to its clearing and settlement services. 2. Clause 43 of the Trade Acceptance Service Legal Terms and Clause 13 of the Settlement Facilitation Service Agreement sets out dispute resolution processes. 3. Individual access request procedure documents for AMOs and ALMOs set out target timeframes for ASX to respond to access requests from AMOs and ALMOs. 4. ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols include target timeframes for dealing with access requests as well as dispute resolution arrangements. 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>3.d) ASX should make an explicit commitment to ensuring that any investments in the systems and technology that support its cash equity Clearing and Settlement services do not raise barriers to access from unaffiliated market operators or Clearing and Settlement facilities. Announcements of any material investments in the systems and technology that support ASX's cash equity Clearing and Settlement services should be accompanied by a public attestation that those investments will be designed in a way that does not raise such barriers.</p>	<ol style="list-style-type: none"> 1. Examined the Code of Practice as published on ASX's website. 2. Enquired with management about material investments in the systems and technology that support ASX's cash equity Clearing and Settlement services. 3. Examined September 2016 Consultation Paper ASX's Replacement of CHES for Equity Post-Trade Services: Business Requirements. 	<ol style="list-style-type: none"> 1. The Code of Practice includes commitment by ASX to "ensuring its investments in the systems and technology that support its cash equities clearing and settlement infrastructure are not designed in such a way as to raise barriers to access to other market operators or clearing facilities". 2. We understand from management that ASX has not made any announcements of material investments in the systems and technology that support ASX's cash equity Clearing and Settlement services. However, in the September 2016 CHES Replacement Consultation Paper, ASX indicated that the system that replaces CHES will provide all market operators (including ASX-affiliated and non-affiliated) with non-discriminatory access to clearing and settlement services. The Consultation Paper also indicated that the system that replaces CHES will be configurable to provide a second licenced central counterparty with non-discriminatory access to settlement services. 3. The September 2016 Consultation Paper states that the system that replaces CHES will provide "issuers and end investors with greater control over, and enhanced confidence in, their market activities through timely, secure and simplified access to the register of holders (for issuers), financial assets (end investors) and associated information." It also states that accessibility will be "readily available to those who are authorised to use it in a non-discriminatory manner." 	<p>Not applicable.</p>



Regulatory Expectation	Procedures	Detailed findings	Recommendations
<p>3.e) ASX should retain, and periodically review, its standards for the handling of sensitive or confidential information. Consistent with governance arrangements that promote access on commercial, transparent and non-discriminatory terms (see Regulatory Expectation 1(e)), these arrangements should ensure that conflict sensitive information pertaining to the strategic plans of unaffiliated market operators or Clearing and Settlement facilities is handled sensitively and confidentially, and cannot be used to advance the interests of ASX as a market operator or Clearing and Settlement facility.</p>	<ol style="list-style-type: none"> 1. Reviewed the Conflict Handling Arrangements policy dated March 2016 published on ASX's website. 2. Reviewed the Information Handling Standard published on ASX's website. 3. Reviewed ASX's Regulatory Assurance Line 2 team's review of Conflicts Handling arrangements. 4. Reviewed the complaints register regarding handling of information and determine if there were any complaints raised in relation to confidentiality and sensitive information. 	<ol style="list-style-type: none"> 1. The Conflicts Handling Arrangements policy includes a specific paragraph on cash equity Clearing and Settlement services, which references Information Handling Standards in place to manage commercially sensitive information provided to ASX by other licensed listing and trading venues. 2. ASX's Information Handling Standard provides for <ol style="list-style-type: none"> i) protection of AMO's confidential and sensitive information. ii) access to sensitive information is restricted to appropriate ASX Employees. 3. ASX's Regulatory Assurance performed a review of the Conflicts Handling arrangement in the first quarter of 2017 covering the period from 1 July to 31 December 2016. We noted that the conclusion of the review was satisfactory. 4. No complaints were noted that relate to the handling of sensitive or confidential information. 	<p>Not applicable.</p>



ASX's Compliance Framework and supporting documents

The table below includes the policies, procedures and other documents which we referred to within our report that form part of the Compliance Framework.

Compliance framework supporting document	Date	Hyperlink to ASX website
Regulatory Expectations	October 2016	https://www.cfr.gov.au/publications/cfr-publications/2016/regulatory-expectations-policy-statement/pdf/policy-statement.pdf
Code of Practice	October 2016 May 2017	Not on ASX's website http://www.asx.com.au/cs/documents/asx-code-of-practice.pdf
Business Committee Meetings - agendas, papers, minutes and Business Committee reports to the ASX Boards	Various version dates as applicable as at the date of this report	http://www.asx.com.au/cs/business-committee-meetings.htm
Clearing and Settlement Boards Charter	November 2016	http://www.asx.com.au/documents/asx-compliance/CS-Board-Charter.pdf
Business Committee Charter	May 2017	Not on ASX's website
Business Committee Role and Membership details	As applicable as at the date of this report	http://www.asx.com.au/cs/business-committee.htm
ASX Clearing and Settlement Boards Charter	November 2016	http://www.asx.com.au/documents/asx-compliance/CS-Board-Charter.pdf
ASX Boards' members details	As applicable as at the date of this report	http://www.asx.com.au/about/asx-clearing-settlement-boards.htm
2014 Oxera report: 'Global cost benchmarking of cash equity clearing and settlement services'	June 2014	http://www.asx.com.au/cs/documents/Global_cost_benchmarking_of_cash_equity_clearing_settlement_services_Final_20Jun14.pdf
2016 Oxera report: 'Global cost benchmarking: review of price lists'	April 2016	Not on ASX's website
Audited 'Cash Market Clearing and Settlement management income statement' - 2017	30 June 2017	Not on ASX's website
ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia	As applicable as at the date of this report	http://www.asx.com.au/cs/documents/cost_allocation_policy.pdf
Audited 'Cash Market Clearing management income statement' - 2016	30 June 2016	http://www.asx.com.au/cs/documents/Management-Accounts-for-Cash-Equities-Clearing-FY16.pdf
Audited 'Cash Market Settlement management income statement' - 2016	30 June 2016	http://www.asx.com.au/cs/documents/Management-Accounts-for-Cash-Equities-Settlement-FY16.pdf



Compliance framework supporting document	Date	Hyperlink to ASX website
Enterprise Wide Pricing Framework	January 2017	Not on ASX's website
ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia	As applicable as at the date of this report	http://www.asx.com.au/cs/documents/cost_allocation_policy.pdf
Clearing, Settlement and Issuer Administration Services Schedule of Fees	July 2016 October 2016 December 2016	Not on ASX's website for July 2016 http://www.asx.com.au/cs/documents/Clearing-Settlement-and-Issuer-Administration-Services-Schedule-of-Fees-effective-17October2016.pdf https://www.asxonline.com/content/dam/asxonline/public/documents/schedule-of-fees/clearing-settlement-and-issuer-administration-services-schedule-of-fees-effective-1-Dec-2016.pdf
Consultation Paper 'ASX's Replacement of CHESS for Equity Post-Trade Services: Business Requirements'	September 2016	http://www.asx.com.au/documents/public-consultations/ASX-Consultation-Paper-CHESS-Replacement-19-September-2016.pdf
CHESS replacement - Public Consultation Feedback Summary	March 2017	http://www.asx.com.au/documents/public-consultations/CHESS-Replacement-Consultation-Response.pdf
ASX Trade Acceptance Service (TAS) – Review of Legal Terms	February 2016	http://www.asx.com.au/documents/public-consultations/Review_of_TAS_Legal_Terms.pdf
Settlement Facilitation Service (SFS) Agreement	March 2014	http://www.asx.com.au/documents/settlement/Settlement_Facilitation_Service_Agreement_Template.pdf
ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols	2017	http://www.asx.com.au/cs/documents/COP-Access-Protocols-1-7-17.pdf
Procedures for Access Requests by Approved Market Operators (AMOs)	2017	http://www.asx.com.au/cs/documents/AMO-Procedures-for-Access-Requests.pdf
Procedures for Access Requests by Approved Listing Market Operators (ALMOs)	2017	http://www.asx.com.au/cs/documents/almo-procedures-for-access-requests.pdf
ASX's Conflict Handling Arrangements	March 2016	http://www.asx.com.au/documents/asx-compliance/asx_conflict_handling_arrangements.pdf
Information Handling Standard	14 June 2011	http://www.asx.com.au/documents/professionals/tas_information_handling_standard_20110614.pdf



Consultation with Business Committee members

Background

The External audit Terms of Reference as presented to the Business Committee in the May 2017 meeting requires the auditor to consult “with members of the Business Committee and other relevant user governance arrangements on the design and operating effectiveness of the policies and procedures”. To that effect, we sent a questionnaire to all 23 Business Committee members, seeking feedback on the compliance of ASX with the Regulatory Expectations. We received nine responses and in three instances confidentiality was requested by the respondent.

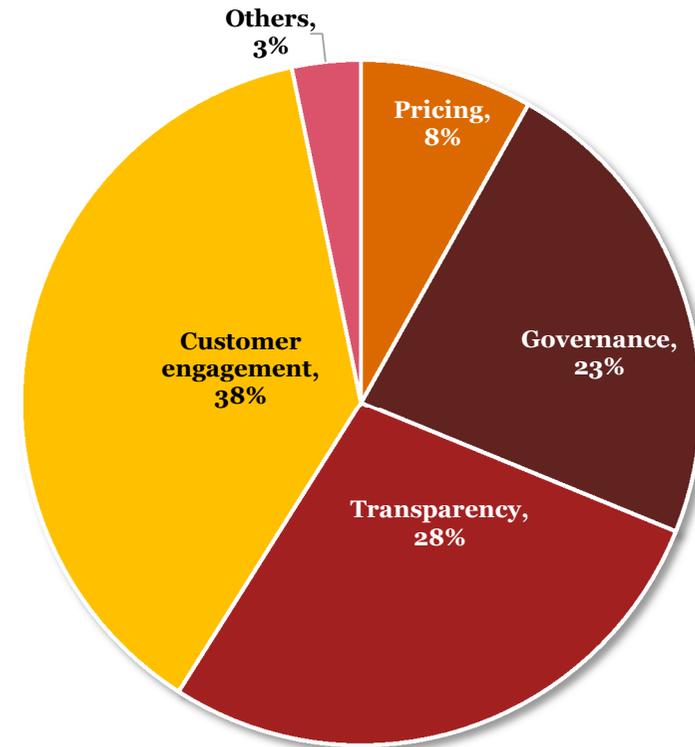
We note that the participants who responded to this survey also took this opportunity to include other observations in addition to matters related to the compliance with the Regulatory Expectations. Where the Business Committee member comments directly related to compliance with the Regulatory Expectations, we designed procedures, as detailed in Appendix A, for us to obtain sufficient appropriate evidence about the compliance of ASX with the Regulatory Expectations. We have not performed testing in relation to the responses which were not directly related to compliance with Regulatory Expectations. All responses have been provided to ASX, unless confidentiality was requested by the respondent.

Chart 1 summarises the Business Committee member responses into key themes.

We have provided below a **summary of the topics raised in the Business Committee members’ responses by key theme**, including topics that are specific to the Regulatory Expectations as well as other topics. This includes both strengths and opportunities for improvement. In certain instances perceived strengths noted by one respondent conflict with feedback received from another member. We have not provided the full detail of Business Committee member comments given these reflect individual views of each of the nine Business Committee members who responded to the questionnaire.

We will separately provide ASX with our consideration of the feedback provided by the Business Committee members. This has not been included in this report as it is not directly linked with ASX's compliance with the Regulatory Expectations.

Chart 1 - Key Themes - Business Committee member responses





Summary of the topics raised in the Business Committee members' responses by key theme

Governance



- Business Committee input into strategy and the development of Clearing and Settlement services
- Two way communication between ASX Boards and the Business Committee

Pricing



- Transparency in method of determination of pricing

Transparency



- Matters discussed at Working Groups
- Due diligence and selection process in relation to the system that replaces CHES
- Process to monitor independence of ASX Boards members
- Policies and procedures over complaints handling process

Customer engagement



- Structure of Business Committee meetings
- Representation of relevant Business Committee members at Working Groups
- Opportunity for Business Committee members to express their views and provide feedback
- Opportunity to discuss the development of ASX clearing and settlement services
- Timeliness of the distribution of Business Committee materials

Others



- Timeliness of responses to requests relating to access to cash market clearing and settlement services
- Quality of customer service standards
- Opportunity for one-on-one consultation with Business Committee members

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 4A	
Topic	CHES Replacement - Business Requirements Working Groups
Date	11 October 2017
Purpose of this paper	Members will be provided with an update on the Business Requirement Working Groups

OVERVIEW

The working group sessions on gathering the inputs to business requirements from external stakeholders continues to track to plan for a 30 November completion and has now passed the half way point.

Since the last update to the Business Committee on 3 August, the working group on Transfers & Conversions has completed its work and the Settlement Enhancements working group is in progress and expected to have its last meeting on 18 October.

As at 15 September the various working groups have identified 28 business requirements in total.

A number of working group participants have provided detailed feedback on both the Corporate Actions and Transfers & Conversions business requirements. ASX have revised the business requirements accordingly, including the drafting of additional business requirements to address participants' feedback, where appropriate. A new business requirement on transferring Cum Entitlement Balances (CEB) has been drafted following further discussions with members in response to diverging views that were expressed when the topic was first discussed.

In addition, some of the feedback to date on the draft business requirements is more relevant for the solution phase. In these instances, the comments have been recorded for later use.

The updated business requirements have been circulated to all participants for further review and comment. Bilateral meetings to discuss any of the business requirements continue to be made available on request.

Engagement levels remain strong with the core working group on Settlement Enhancements now standing at 27 members.

A key change to the process for managing the working group has been to distribute a paper outlining the scope of topics to be included in the working group two weeks prior to the first meeting. This is in response to feedback from participants that, given the increasing complexity of topics being covered in upcoming workshops, they would like additional time to prepare and solicit feedback from their colleagues on the topics for discussion so they can represent their organisation's point of view. Participants have a week to prepare prior to the release of the pre-reading material (issued one week prior to the first workshop) which includes questions to be answered to help assist participants' preparation.

Key Themes – Transfers and Conversions

Key themes emerging from the problems statements identified during the Transfers and Conversions working group include:

- no consistent application of validation rules for holder registration at the time an account is opened,

-
- no consistent approach to how information is entered e.g. street vs st, which requires the share registries to perform a cleansing exercise, and
 - the excessive amount of paper that needs to be sent between participants which prohibits electronic transfers.

For the period 1 July 2016 to 30 June 2017, there were 136,876 rejected conversions of which 37% were due to registration details not matching.

Key themes emerging on the inputs to the business requirements for Transfers and Conversions include:

- application of a consistent and standardised structure for the input and maintenance of holder's registration details by all relevant industry stakeholders,
- removal of the requirement for Custodians to lodge paperwork with Share Registries for off-market transfers, and
- removal of the requirement for brokers to send client (paper) authority between brokers before a transfer can be processed.

Settlement Enhancement Working Group - Update

The Settlement Enhancements Working Group are currently in progress, and at the time of writing, the first of four possible working group meetings has occurred. The first meeting focused on (i) Settlement Optimisation i.e. how to promote efficiencies in the settlement process including reducing settlement risk and (ii) Settlement Optionality i.e. the option to settle earlier than the current default T+2 settlement batch.

Key early themes emerging to date on the problem statements for Settlement Enhancements include:

- improving the lead time for participants to identify clients SRN details,
- providing the ability to be able to lock brokers sponsored and issuer sponsored client stock thereby eliminating the requirement to reconcile the accumulation entrepot account, and
- reducing the elapsed time of the daily settlement cycle.

Key themes emerging to date on the inputs to the business requirement for Settlement Enhancements include providing:

- a single point of access to view the issuer sponsored sub-registers to readily identify SRNs associated to holdings,
- real-time notification on funding amounts to expedite the settlement approval process, and
- the option to be able to elect an early settlement.

A summary of the draft business requirements for Transfers & Conversions and Settlement Enhancements have been provided in Attachments A & B. The pre-reading materials have been provided in Attachment C and Attachment D respectively.

Next Steps

Identifying additional Settlement Enhancement business requirements as the working group considers the remaining topics. It may be possible to complete the Settlement Enhancements business requirements in three meetings, rather than the original plan for four meetings.

If this can be achieved then there may be an opportunity to bring forward the timeline for the two remaining working groups: Data Storage, Delivery & Reporting; and Non Functional Requirements.

This in turn could allow more time for the business prioritisation exercise where all stakeholders, at the conclusion of the functional working group meetings, will be given the opportunity to indicate their

prioritisation of the business inputs. This is currently scheduled to be completed on 15 November, for consideration by the Business Committee on 30 November.

It is conceivable there may be more than 40 business requirements by the conclusion of all the functional working groups. The planning for the prioritisation exercise, including the methodology and tools to be used, will begin shortly.

ASX has also started planning for the Data Storage, Delivery & Reporting working group. In the event the timeline is brought forward, a paper outlining the topics within scope for that working group will be issued by 4 October, two weeks prior to the first working group meeting on 18 October.

Working through participants' comments and questions on the draft business requirements is expected to continue including the AMOs review of business requirements captured prior to their participation in the Settlement Enhancements working group.

ATTACHMENTS

Attachment A – DRAFT Transfers & Conversions Business Requirements Input

Attachment B – DRAFT Settlement Enhancements Business Requirements Input

Attachment C – Transfers & Conversions Pre-reading material

Attachment D – Settlement Enhancements Pre-reading material

Attachment E - User Engagement Plan 2017

Attachment A – DRAFT Transfers and Conversions Business Requirements Input

Req #	Description	Impacted stakeholders
TC.1	<p><u>Name</u> Standardised Registration Details</p> <p><u>Requirement</u> Application of a consistent and standardised structure for the input and maintenance of holder’s registration details by all relevant industry stakeholders</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Consistent application of validation rules at the source of entry / account opening • Standardisation of abbreviations e.g. Ave versus Av • Additional rejection codes for greater transparency as to the exact cause of the rejection • Standardisation on how holders full names are entered e.g. full middle names vs initial only • Validation of holder records created from company corporate events e.g. demutualisations and IPOs • Support multiple legal names on registration details e.g. more than three legal names on a trust account <p><u>Pre-conditions</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
TC.2	<p><u>Name</u> Custodian Off Market Transfers</p> <p><u>Requirement</u> Remove the requirement for Custodians to lodge paperwork with Share Registries for off-market transfers</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Introduce an alternative form of Investor protection that could be adopted by Custodians (such as Professional Indemnity and / or Security Bonds) that would allow Registries to be able to accept electronic transfer without any follow up paperwork <p><u>Pre-conditions</u></p>	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
	<ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements 	

Req #	Description	Impacted stakeholders
TC.3	<p><u>Name</u> Broker to Broker Transfers</p> <p><u>Requirement</u> Remove the requirement for Brokers to send Client (Paper) authority between brokers before a transfer can be processed</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Improve the timing of Client transfers • Reduce the amount of paper being sent between Participants <p><u>Pre-conditions</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
TC.4	<p><u>Name</u> Change of Controlling Participant</p> <p><u>Requirement</u> Provide flexibility to the change of controlling participant process whereby:</p> <ul style="list-style-type: none"> • A reversal option is available for bulk transfers • Consistent rules for individual and bulk transfers • Partial bulk transfers to be supported by contemporary means of notification and record keeping (i.e. removal of spreadsheet) • All participants to transfer clients in a bulk fashion without processing dual entry messages • Holdings associated to a PID or multiple HINs can be transferred to a single HIN (e.g. omnibus) • Electronic process where possible 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
	<p><u>Rationale</u></p> <ul style="list-style-type: none"> • Introduce ability to interrupt and reverse bulk transfer processing prior to completion of processing, returning all stakeholder systems to the same previous state • Introduce ability to systemically control participants connection and message collection when bulk transfer processing is complete • Introduce an alternative to notifying partial transfers via spreadsheet <p><u>Pre-conditions</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements 	

Attachment B – DRAFT Settlement Enhancements Business Requirements Input

Req #	Description	Impacted stakeholders
SE.1	<p><u>Name</u> Issuer Sponsored SRN Transparency</p> <p><u>Requirement</u> Provide a single point of access to view the Issuer Sponsored subregisters in order to facilitate transparency for Clearing and Settlement Participants to readily identify Shareholder Reference Numbers (SRNs) associated to holdings.</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Improved lead time for participants to identify their clients SRN details • Reduce settlement risk with early confirmation of a clients Issuer Sponsored holding • Improve settlement certainty <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements, inclusive of mandatory information 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
SE.2	<p><u>Name</u> Locking Retail Securities</p> <p><u>Requirement</u> Provide the ability to validate and lock:</p> <ol style="list-style-type: none"> 1. Broker Sponsored securities (due to be delivered against a sell transaction) and deliver them into the Participants Settlement Entrepot Account on settlement day as part of the batch processing; 2. Issuer Sponsored securities (due to be delivered against a sell transaction) and deliver them (early) into the Participants Settlement Entrepot Account on the morning of settlement day <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Improved investor protection, especially in a default situation • Provides settlement certainty • Improved settlement process efficiencies 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
	<ul style="list-style-type: none"> • Elimination of the requirement to reconcile the Accumulation Entrepot Account • Potential reduction in Cash Market Margins • Potential reduction in Counterparty Exposures (Issuer Sponsored transactions) • Potential reduction in the number of Corporate Actions claim <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Change relevant rules and regulations to accommodate desired system and process enhancements, inclusive of mandatory information 	

Req #	Description	Impacted stakeholders
SE.3	<p><u>Name</u> Shorter Settlement Cycles</p> <p><u>Requirement</u> Provide real-time notification to Settlement Participants and their Payment Providers on the funding amount to expedite the Settlement approval process</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Reduce the duration of the daily settlement cycle • Reduce the time Payment Providers require to approve batch payments • Facilitate Payment Provider “limit breach” approval sooner • Allow Settlement Participants greater control on their cash flow requirements <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Assessment of cut-off time (11:30am) • Consultation and agreement with regulators, issuers and other industry stakeholders • Ensure rules are consistent and up to date • Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
SE.4	<p><u>Name</u> Early Settlement (Clients)</p> <p><u>Requirement</u> Allow for Clearing and Settlement Participants to be able to elect an early settlement for any of their clients sell or buy transactions by seeking the off-setting transaction or making use of ASX facilitated Stock Lending and / or Financing arrangements.</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Facilitate early settlement for clients • Potentially reduce Cash Market Margins • Potentially reduce Counterparty Risk Exposures • Improved settlement certainty • Reduce potential settlement risk <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Ensure rules are consistent and up to date • Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
SE.5	<p><u>Name</u> Exchange Traded Options - Collateral</p> <p><u>Requirement</u> Ability to release Exchange Traded Options (ETO) collateral (cash equities) directly into the Participants Settlement Entrepot Account as an offset to the exercised (equity contract) ETO position.</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> • Remove the requirement to fund the Cash Market Margin with cash between the exercise and settlement dates • Improve settlement efficiency following the exercise of an ETO position <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Changes to Derivatives Clearing System (DCS) • Consultation and agreement with regulators, issuers and other industry stakeholders 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
	<ul style="list-style-type: none"> Ensure rules are consistent and up to date Change relevant rules and regulations to accommodate desired system and process enhancements 	

Req #	Description	Impacted stakeholders
SE.6	<p><u>Name</u> Bilateral DvP Settlements Outside of “Batch”</p> <p><u>Requirement</u> Provide the ability for Participants to settle Bilateral DvP Settlements (on a line for line basis) outside of the Settlement batch utilising RTGS, NPP or another real-time payment capability.</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> Improved funding requirements for Participants Facilitate client settlements more efficiently Improved Corporate Actions experience (buyers name on register by record date) Reduce Settlement risks Reduce Counterparty Exposures <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> Consultation and agreement with regulators, issuers and other industry stakeholders Ensure rules are consistent and up to date Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p> <p>Australian listing markets</p>

Req #	Description	Impacted stakeholders
SE.7	<p><u>Name</u> “Pre” Matching Bilateral Transactions</p> <p><u>Requirement</u> Allow for Bilateral transactions to be “pre” matched prior to making a commitment to Settlement which would be confirmed as a subsequent step.</p> <p><u>Rationale</u></p> <ul style="list-style-type: none"> Confirm that the correct counterparties have been identified Provide auditability 	<p>Custodians</p> <p>Holders/Investors</p> <p>Trading, Clearing and Settlement Participants</p> <p>Issuers</p> <p>Share Registries</p> <p>Regulators</p> <p>ASX CS Facilities</p>

Req #	Description	Impacted stakeholders
	<ul style="list-style-type: none"> • Allow mismatches (value, transaction basis etc.) to be identified and corrected earlier <p><u>Pre-condition</u></p> <ul style="list-style-type: none"> • Consultation and agreement with regulators, issuers and other industry stakeholders • Ensure rules are consistent and up to date • Change relevant rules and regulations to accommodate desired system and process enhancements 	<p>Australian listing markets</p>

CHES Replacement – Transfers & Conversions Working Group

PRE-READING MATERIAL

SEPTEMBER 2017



This document has been prepared for ASX's CHESS Replacement Working Groups and is not to be used or distributed for any other purpose without prior permission of ASX

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PURPOSE OF THIS PAPER

The purpose of this paper is to set out the key topics to be discussed at the forthcoming Transfers & Conversions workshops.

Agenda topics have been determined after careful consideration on the feedback obtained from participants as part of the Consultation Process conducted late last year. This paper therefore seeks to provide information on these topics to help set the focus and manage participants’ expectations. It is not intended to serve as an education process.

Participants are asked to nominate a representative with the appropriate knowledge and expertise in the area of Transfers & Conversions.

The workshops will facilitate further discussion on the topics presented in this paper.

BACKGROUND

To ensure a common understanding on the language to be used in the workshop, this section seeks to provide a definition on transfers and conversions.

Transfers and conversions relates to various transaction types that cater for moving holdings between different parties. The difference between a transfer and conversion is as follows:

Transfers

- move units from one subregister to another where a change of legal title is required; or
- move units from sponsored client to another sponsored client, i.e. within the CHES subregister (legal title may or may not change); or
- move sponsored clients from one participant to another participant, i.e. change of controlling participant

Conversions

- move units from one subregister to another (e.g. issuer sponsored subregister to CHES subregister or vice versa) and the legal titled cannot be altered i.e. there can be no change in holder registration name or address during a CHES conversion process

UNATTRIBUTED FEEDBACK FROM THE CONSULTATION PROCESS

The below table details participants’ responses as it relates to the topic of Transfers and Conversions. It is not intended to be an exhaustive list but rather a sample only.

	Topic	Sample of unattributed consultation responses
1	Paperless transfer and conversion processing	<ul style="list-style-type: none"> • Eliminate paper based transfers (conversions, moving securities from other markets i.e. shunts) • Allow participants to instruct shunts, creations and redemptions directly via the system • Remove paper based requirements inc. CHES/SRN conversions, ADR processing, intercountry transfers • Conversions are not standardised between brokers and registries, are too paper based and not centralised • Eliminate paper transfer of securities such as SRN-CHES and movement of securities from other markets (e.g. NZ) • Remove all paper based requirements for Australian standard transfers – as they are today for SRN to CHES custodian

	Topic	Sample of unattributed consultation responses
		<p>participants. Similarly for transfers between different registers when moving stock cross border</p>
2	Registration details	<ul style="list-style-type: none"> • Create a CHES message that allows Participants to request minor changes to SRN details to enable easier conversions of SRN holdings e.g. salutations, St to Street, updating postcodes in line with Australia Post etc. • Making it easier to maintain investor details – this currently leads to inefficient conversions • Efficiencies in transfer, conversion processes between issuer and broker sponsored registries • Enhancing the share registries’ ability to authorise conversions and transfers between sub-registers will improve the shareholder experience
3	Processing bulk movement of HINs and holdings (aka data migrations)	<ul style="list-style-type: none"> • CHES provides for bulk transfers of clients and positions between participants via the change of controlling PID process. In the case of large migrations this process can be expensive in terms of messaging costs and managing what can be a very long running process. The new solution offer alternatives to bulk messaging for these situations e.g. file transfer, separate asynchronous queues or statement type messages. A lower cost and more robust mechanism to significantly streamline and de-risk migrations.
4	Security transfer simplification (e.g. reduce number of message alternatives)	<ul style="list-style-type: none"> • The sets of messages to cover transferring holdings between CHES and issuer sponsored sub-registers should be consolidated into a single, more flexible message to simplify message flows thereby enhancing robustness across the end-to-end transfer process

SCOPE

The workshop **will focus** on the following topics as it relates to examining any potential efficiency gains in the transfers and conversions processes:

- Explore opportunities for a paperless transfers and conversions process, including investor protections
- Discuss any issues with registration details
- Examine the process of converting dual listed securities from a holding on a foreign market to a holding on the Australian market, or vice versa (aka shunting)
- Investigate any enhancements in processing a change of controlling participant, specifically, the bulk transfer of HINs (note – this topic has previously been referenced as 'data migrations')

The workshops **will not focus** on the following topics:

- Methods of securities code allocation: this topic will be revisited in the Settlements Enhancements workshops as part of deferred trading and settlement of new securities
- Basis of movement: this topic will be revisited at a later point in time as part of the follow-ups on CUM Entitlement Balances
- Security transfer simplification (e.g. reduce number of message alternatives): the ISO20022 Technical Committee has a charter to review recommendations for message simplification. This includes CHES to CHES transfers, and transfers and conversions between Issuer-sponsored and CHES sub-registers. As part of the ISO20022 adoption, ASX expects to define and realise benefits from a more structured and repeatable definition, such as registration details in a common format

PAPERLESS TRANSFERS AND CONVERSION PROCESS

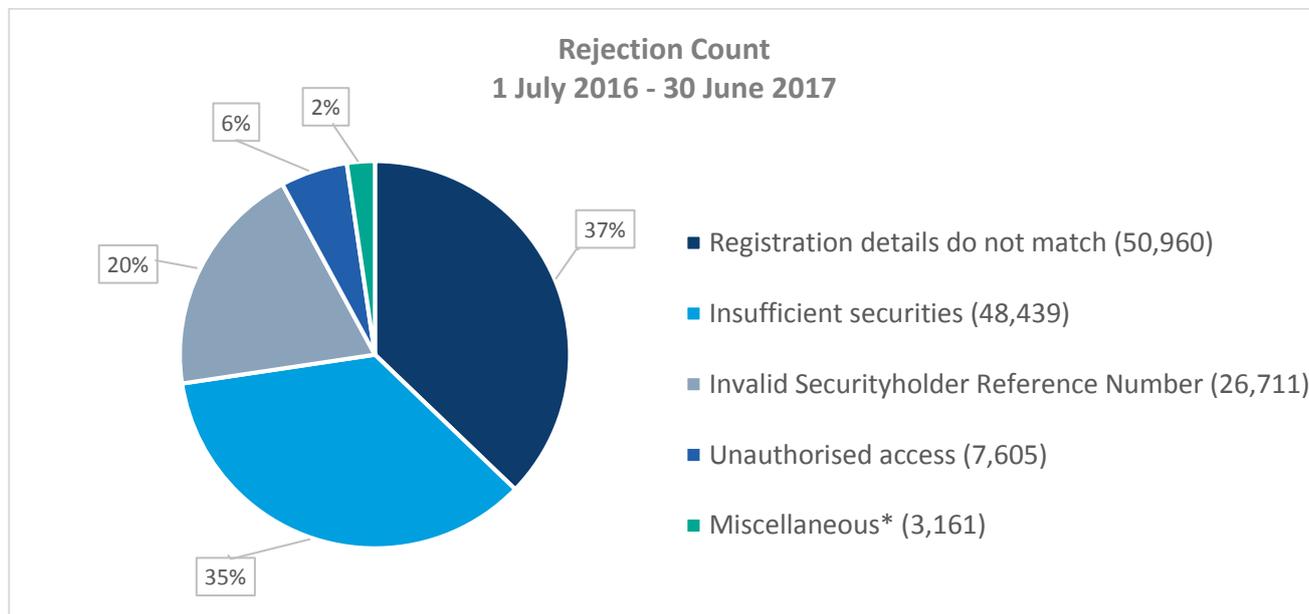
The workshop will explore the current transfer or conversion process between issuer sponsored and broker sponsored transactions to understand where paper comes into play today. For example, the requirement for a custodian to send supporting paperwork to the relevant share registry to effect a transfer.

The workshop will also explore examining the movement between Australian registers and offshore registers i.e. shunting, to similarly understand where paper comes into play. For example, the holder sends the necessary documents to an Australian registry when requesting dual listed securities be converted to a foreign register.

Therefore, the workshop will devote time to identifying where in the end to end process paper is used today to tease out the problem statements and in turn, develop high level business requirements.

REGISTRATION DETAILS

The drivers behind a large proportion of transfers and conversions is driven by rejections. The cause of the rejections can take a variety of forms per the following diagram:



* Miscellaneous includes Documentation not received (1,377), Issuer holding locked (1,354), Documentation incorrectly signed (198), Insufficient Cum Entitlement (117), Invalid Foreign Guarantee (59), Probate not noted (55) and Certificate invalid (1)

As illustrated, the largest driver for rejections is due to **registration details not matching** despite both the ASX and share registries adhering to predefined standards. However, the current standards are broad, antiquated and validation is not controlled by a central source. Collectively, these factors can result in a mismatch to the standard.

This mismatch becomes an issue when an investor, holding their shares on an SRN, elects to sell their shares or convert them to a HIN. Share Registry systems can reject the participants request on behalf of their investor to move the holdings between their SRN and HIN. The rejection results in manual intervention by the participant in order to resolve the mismatch issue with the investor and Share Registry. This process can involve multiple messages between the participant and share registry and often the completion of manual forms by the investor.

This has a broad impact to the market including:

- Participants: settlement delays resulting in fail fees, some of which are passed onto the investor, in addition there is a resource overhead required to resolve the mismatch
- Investors: settlement delays and manual form completion
- Issuers: increased costs due to multiple message processing
- Share Registries: resource overhead required to assist with the mismatch issue

Participants should come prepared to discuss the causes behind registration details not matching to understand what can be achieved to reduce the number of conversions messages. Refer to Appendix A for details on Registration Name and Address Standards.

CHANGE OF CONTROLLING PARTICIPANT

The workshop will focus on the current process for a change of the controlling participant, specifically, the bulk transfer of HINs and any related inefficiencies.

CHES provides three methods for effecting a change of the controlling participant for a holder or holding:

- Changing the controlling participant for one holder (individual HIN);
- Changing the controlling participant for multiple holders (partial bulk transfer); and
- Changing the controlling participant for multiple holders (full bulk transfer)

Individual HIN Change of Controlling Participant

This facility changes the controlling participant for an existing CHES holder from one participant to another. This is used when a holder decides to change their controlling participant (e.g. Broker) for all holdings held under a particular HIN.

The requesting participant initiates a request to the relinquishing participant via CHES EIS messaging. When the relinquishing participants approves the request, the transfer will be processed the following End of Day.

Bulk Transfers

There are two options for transfers in a bulk fashion within CHES:

1. Partial bulk change of sponsor
2. Full bulk change of sponsor

A change of controlling participant form must be completed and signed by the relinquishing (old) and receiving (new) participants for bulk transfers.

A **partial bulk change** of sponsors occurs when only some holders are being transferred to another participant. An example is when an advisor move from one participant to another and takes their client base to the new participant. The relinquishing participant is required to provide a list of HINs to be transferred on an excel spreadsheet.

A **full bulk change** of sponsor occurs when all HINs are being transferred to a new participant. That is, all the HINs from the relinquishing participant are transferred to the new participant (with the exception of Entrepot HINs).

Participants should come prepared to discuss any inefficiencies in the current process for both partial and full bulk changes and the problems it presents within their own organisations.

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Appendix A – Registration Name and Address Standards

The following outlines the current CHESS registration name and address standards which may be referenced in the workshops.

General Standards

A holder's registration details are made up of six lines (or blocks) of information, each of up to thirty characters (including spaces and punctuation).

Unless permitted under an issuer's constitution, do not establish a CHESS holding that would be held jointly by more than 3 persons.

Punctuation is acceptable as are all other special characters (e.g. hyphens, apostrophes, etc.) with the some exceptions (refer to the ASX Procedure Guidelines).

Name Standards

Use a holder's full name to avoid possible confusion and errors with holders having similar names. If a surname contains a space, do not include that space in the registration details.

Holdings may be registered in the full name of a person or corporation or in the joint names of persons or corporations.

If a corporation has an ampersand in its registered name, include the ampersand in the registration name.

Holdings must be registered in the correct legal name of the holder. For example, in the case of a person or company carrying on business under a registered business name, the holding should be registered in the person's or company's name rather than the business name. In the case of holdings for a trust, the holdings should be registered in the name of the trustee or trustees of the trust rather than in the name of the trust. In the case of holdings for the estate of a deceased person, the holdings should be registered in the name of the legal representative or representatives of the deceased person.

Enter personal names in the following order: (a) Salutation (MR, MRS, etc.); (b) Given names in full; (c) Surname.

Always include a person's title.

Identify the end of the holding name or names with a comma (,).

Where the holding is in joint names, link the names with a plus (+) sign.

Enter the name of each person in a joint holding in full, as you would an individual holder, with separate titles and separate names.

If there is insufficient space on the first line, continue onto the second line. When a name is extended to the second line, never break a word over the end of a line.

Where a name is exactly 30 characters long, place the comma as the first character on the next line.

Company names can only be abbreviated by the use of legally accepted abbreviations such as CO, PTY, and LTD.

Where a designation is required to be recorded after the holding name or names enter the designation between angle brackets (i.e. less than "<" and greater than ">" symbols) followed by the word ACCOUNT. A/C may be used if space is restricted. Insert the comma used to separate the name or names from the address.

Address Standards

Start the address on the line following the name details; do not start it on the same line as the name.

If the address includes a floor, flat, unit or apartment, enter it in full if space permits. If space is restricted, use the abbreviations (refer to ASX Settlement Procedure Guidelines).

Enter the words STREET, ROAD, AVENUE, etc., in full if space permits. However, do not start a new address line just to enter one of these in full. Use standard abbreviations for street (ST), road (RD), avenue (AVE) etc., if necessary.

GPO BOX and PO BOX are acceptable addresses, but must not contain any full stops.

The last line of all Australian addresses should contain the suburb, town, or city and the state or territory. The state or territory must not appear on a line by itself unless there is insufficient space to include it on the previous line (e.g. because the town name is very long).

Use Standard abbreviations for a state or territory must be used, but again no full stops are permissible (refer to ASX Settlement Procedure Guidelines).

Australian Postal Codes and country codes (if required) should commence in the 23rd position of the (6th) final line. Always reserve the final 8 characters of the 6th and final line for these items.

An Australian postal code must be valid for the specified suburb, town, or city and state.

Enter the name of any foreign country in full unless there is a standard and well known abbreviation (e.g. UK, USA, etc.). Enter this as the last line of the address details.

A country code must be valid for the specified country. For a list of valid country codes (based on from ISO Standard 3166).

Include overseas postcodes in the main part of the name and address set, adjacent to the country or state.

Example

MR GEORGE FREDERICK JONES + MRS

MARGARET LINDA JONES

< NO 2 ACCOUNT > ,

500 BOURKE STREET

MELBOURNE VIC

3000

CHES Replacement – Settlement Enhancements Working Group

PRE-READING MATERIAL

SEPTEMBER 2017



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1. Purpose of this Paper

The purpose of this paper is to set out the key topics to be discussed at the forthcoming Settlement Enhancements workshops.

Agenda topics have been determined after careful consideration on the feedback obtained from stakeholders as part of the Consultation Process conducted late last year. This paper therefore seeks to provide information on these topics to help set the focus and manage stakeholder expectations. It is not intended to serve as an education process.

Stakeholders have been asked to nominate a representative with the appropriate knowledge and expertise in the area of Settlements.

The workshops will facilitate further discussion on the topics presented in this paper.

2. Background

A number of respondents commented that a top priority was to have efficient and cost effective settlement processes and the ability to settle trades using bilateral DVP line by line real-time settlement, to name only two of the ten key topics in focus. Section 4.0 outlines the full scope of topics for the workshops. Many Participants have also requested further detail on the settlement optionality. Therefore, the workshops are not looking to cover the end to end settlement process but rather to focus on those processes and functions that the majority would like to see changed or where Participants are seeking additional information to be able to comment further on potential future requirements.

3. Unattributed Feedback from the Consultation process

The below table details stakeholder responses as it relates to the topic of Settlement Enhancements. It is not intended to be an exhaustive list but rather a sample only.

#	Topic	Sample of Unattributed Consultation responses
1	Legal Name on Title	<p><u>Legal Name on Title</u></p> <ul style="list-style-type: none"> Support Legal name on title throughout settlement and remove the need for an Accumulation HIN. Any reduction in settlement risk and unnecessary transfers of ownership is beneficial during corporate action entitlements that coincide with settlement preparation Settling directly in the registered name eliminates the need to move stock between entrepots Enhancement of the reduction in risk associated with change of title and ultimate settlement is beneficial and aligns with FSS developments. It reduces complexity in cum and ex trading and exposure to claims. Requires enhancement of reserved positions and we would expect to see simpler settlement reconciliations Support retaining Legal Name on Title throughout settlement in principle, but note also that it will not benefit all participants equally. Client protection is certainly achieved in a simpler, more elegant, and potentially more reliable way than the present one of tracking beneficial ownership of stock in the accumulation account, together with fall-back to funds held in trust Support removing entrepot accumulation account if encumbrances can be extended to the issuer sub-register. However, if this cannot be extended to the issuer sub-register then participants will require a nominee to hold client assets

#	Topic	Sample of Unattributed Consultation responses
		<p><u>Security Encumbrance</u></p> <ul style="list-style-type: none"> • Support Expand security encumbrance (non-transferable state) capability. Foreseeable potential uses could include restricting the movement of escrowed holdings (via the introduction of holding lock functionality) as part of the admission processes for new listed entities. • Expand security encumbrance capability to lock a holding will provide a medium benefit • Security encumbrance – extending holding locks would be a large cost, minor benefit. Margin lending and structured products that rely on security of underlying securities might avoid the need to transfer securities to protect ownership and remove the need to use a nominee. Major change to systems and processes may be necessary. Would need to control where the dividend flows • Support settlement participants having the option but not mandated encumbrance • Should reduce risk and the resulting liquid capital requirements significantly for non-sponsored sells, delivering significant advantages, reduced risk, and benefits in collateral management • Concerns that encumbrance flags would create unnecessary messaging complexity and authorization procedures to move securities • Expand security encumbrance (non-transferable state) capability is tightly coupled with the removal of the accumulation HIN • This is not something that we would support for initial implementation. It could be an encumbrance to client stock mobility. Stock belongs to the client until settlement, a lock has the potential to limit a client's use of that stock up to settlement (e.g. securities lending)
2	Give ups / Take-ups	<ul style="list-style-type: none"> • The addition of trade “give up / take up” capability for cash market executions offers an opportunity to reduce settlement costs by reducing the need for multiple settlements between the executing broker and the investor's custodian or prime broker. The functionality is currently offered for ASX derivatives • Implementation of a clearing give-up/take-up facility to allow margined obligations to be transferred between participants
3	Bilateral Settlement	<ul style="list-style-type: none"> • Additional settlement capability post-batch through cost effective RTGS • RTGS settlement functionality and/or additional settlement batches • Allow the scheduling of bilateral DVP settlements outside scheduled batch settlement times

#	Topic	Sample of Unattributed Consultation responses
		<ul style="list-style-type: none"> • The Tiered Tolerance Model for matching settlement amounts should be carried over from CHES. This feature is critical in minimising settlement failures by matching small cash differences, typically due to price rounding • Should seek participant feedback on increasing the tolerance to a minimum of \$10.00 and increasing at a ratio commensurate with trade value and clearing and settlement fees. This will eliminate the need to cancel unmatched messages when a cash difference between Clearing Participants is negligible saving the Clearing Participant administration cost and additional CHES fees
4	Matching criteria for Free of Payment (FOP) & Bilateral Settlement Transactions	<ul style="list-style-type: none"> • Mandate use of unique matching criteria for free of payment securities movements across participants • The irrevocable pre-matching model applied, providing an increased level of certainty of settlement ahead of the settlement batch • Elimination of Financially Encumbered Free-of-payment Deliveries: refers to the recently introduced practice of attaching financial value to free-of-payment deliveries, in order to effect intraday transfer between a participant's general and trust bank accounts, separate from the transfer of settlement funds. Opposed this practice before its introduction, and still holds serious reservations. It restricts back office management of free-of-payment deliveries, and their associated financial settlements. Attaching financial value to free-of payment settlements is one factor standing in the way of fuller uptake of a mechanism that otherwise provides superior client protection • The outcome of attaching trust value to free-of-payment deliveries and associated downstream processing has not been wholly effective. Moving to international standard messaging protocols, then a free-of-payment delivery that has associated financial impact separate from settlement is something that should probably be avoided • Enhanced matching of Free of Payment pre-matching and introducing beneficiary BIC code as mandatory matching criteria • System should allow for underlying client info to be submitted to the system to allow for detailed settlement allegation to be provided to counterparties, coupled with unique matching criteria would eliminate settlement mismatches for free of payment settlements
5	Linking Off-market and On-market trades	<ul style="list-style-type: none"> • Allow linking of turnaround settlements • The current RVP/DVP solution in CHES does not link instructions. This is a particular concern for agency brokers where on-exchange settlement is used to fund off-exchange transactions to on-deliver to clients, and vice versa • Allow trades to be linked into contingent settlement - whereby a delivery trade(s) cannot settle until a receipt trade has settled • Allow settlement participants to link OTC and DVP settlements for the same client

#	Topic	Sample of Unattributed Consultation responses
6	CHES processing when the settlement cycle is running	<ul style="list-style-type: none"> CHES down for 90 mins during the batch – if open during that period it would be more efficient, 24 hr availability would allow for more efficient resourcing
7	Settlement Optionality	<ul style="list-style-type: none"> Provide settlement period choices: unclear if there is significant demand for accelerated settlements. The cost of support for managing variable settlements at the transaction and operational levels could be significant Choice of settlement periods is appealing as a market operator as it enables the delivery of choice across listed entity and market user stakeholder groups, as well as extending access to market liquidity Variable settlement cycles, some possible benefit to institutional and principle trading activity, however the benefits of netting to T+2 probably are more than same day settlement. We are cautious of multiple intra-day settlement cycles due to the requirements of FSS for retail client transactions and settlement would make such process difficult under current processes Settlement optionality contrary to maintaining a post-trade environment that aims to reduce counterparty risk, systemic risk and providing operational efficiency. Imposing an additional administrative burden on participants, without significant benefit. A settlement cycle that deviates from global markets could encourage fragmentation. Propose t+2 settlement with a view to move to a t+1 settlement approximately 12mths later as the sole convention The optionality of Settlement allowing Clients to choose between T+0 to T+2 being proposed will not provide the required efficiency, value, or reduction in cost, creates complexity in the clearing process which may reduce the current high efficiency netting Current settlement batch is efficient. Little benefit in reducing or moving the batch or adding another batch. Could be some benefit in introducing a late day T+0 batch. Could consider an RTGS DVP functionality for post-batch settlement, including to facilitate record date trading. Talk of T+1, T+0 settlement could merit consideration of ex-date trade period and cum entitlement processing The current batch works well and would welcome the ability for participants to settle trades DVP following the completion of a primary settlement batch including the ability to settle trades using bi-lateral DVP line by line settlement at a cost comparative to batch settlement. Increasing the number of settlement batches could assist in settlement clearance, but could also prove problematic from a funding and flow on of settlement coordination with other settlement participants' perspective. Settlement timetables need to be cognisant of offshore client base, any move from the current default T+2 settlement would need to be in line with the majority of major overseas exchanges. Do not see any real benefit in settlement optionality. The facilitation of such a service would negate any benefit achieved to both client and CS Participant Some CP do not want to see additional batches nor settlement period of choice – add complexity and limited by treasury funding cycles

#	Topic	Sample of Unattributed Consultation responses
8	Deferred Settlement and Trading	<ul style="list-style-type: none"> • Transparent method of allocating ASX Code/ISINs to facilitate new issues • Eliminate deferred delivery/settlement trading of new securities to allow for immediate conversion and allocation • CHES replacement should be used to assist participants in the issuance of new ISIN codes and then the conversion process between the newly issued line and the parent security. This process should take place in a reduced timeframe with automated notifications to market participants upon its completion • Currently ASX settle IPO/SPO transactions on a separate stock symbol, but also require that these are tagged with the appropriate transaction basis. Efficiency can be gained by processing on the stocks ordinary symbol, and utilising the transaction basis to separate the IPO/SPO
9	Multi-Currency Settlements	<ul style="list-style-type: none"> • No support for Multi-Currency due to the complexity and direct completion with Broker FX services • Support Multi-currency Capability if embraced by the participant community. Assume the intention is to deal with AUD settlement of foreign denominated instruments, rather than foreign currency settlement of AUD-denominated instruments • Would be of benefit if CHES replacement could facilitate settlement in currencies other than AUD in order to attract additional foreign investment and dual listed of securities
10	Settlement Messages	<ul style="list-style-type: none"> • Raised in the Technical Committee to investigate whether certain Settlement messages could become "optional" as apposed the current state of "mandatory" • Some participants receive very large volumes of MT138 netting messages at the end of day as part of CHES batch. Request a bulk based mechanism as an alternative for large volume participants. This would be available as part of end of day download and processing for certain message types. The benefit of this approach is a faster, more repeatable and robust mechanism to provide a 'stretch' capability within the system for very large volume participants

4. Scope

The workshop **will focus** on the following topics as it relates to examining any potential enhancements to the settlements process:

1. Legal Name on Title

Explore how securities remain in the legal holder's name, whether held on the CHES or Issuer Sponsored sub-registers, up until point of settlement. This will include examining (i) the use of **accumulation/ settlement entrepot** accounts; and (ii) putting in place **holding locks** over securities to ensure that they cannot be transferred unilaterally.

2. Give ups / Take ups

Explore the feasibility of introducing give-up functionality to allow a Trading Participant to **give-up** trades to another Clearing Participant other than their default Clearing Participant. The receiving Clearing Participant would then assume the clearing obligations.

3. Bilateral Settlement

Explore the options for (i) the ability to conduct bilateral, line by line, **real-time DVP settlements** (via RTGS and NPP) outside the daily default settlement cycle; and (ii) a review of the three tiered **tolerance model for matching settlement amounts**.

4. Matching criteria for Free of Payment (FOP) and Bilateral Settlement Transactions

Explore the **matching criteria** use for FOP transactions and bilateral settlement transactions and consider whether or not other matching criteria is required.

5. Linking Off-market and On-market trades

Investigate any requirements (and subsequent benefit) for linking **off-market (bilateral settlements) with on-market NBO's (Net Broker Obligations)** during the settlement cycle to identify the underlying source of obligation, facilitate automated scheduling and potentially reduce settlement risk.

6. CHES processing when the settlement cycle is running

Explore the benefits of allowing transactions to be processed during the **daily settlement cycle**.

7. Settlement Optionality

While ASX will maintain T+2 as the default settlement period, the new system could also allow Participants to choose to settle their transactions early. Therefore we will be asking the Working Group to look at the appetite for **early/flexible settlement** if the optionality was to be provided. **Securities lending and financing** arrangements will also be examined in lieu of counterparty support for settlement optionality.

8. Deferred Settlement & Trading

This topic was transferred from the Corporate Actions Working Group and we will be looking to the Settlement Enhancements Working Group to explore the pros and cons of **deferred settlement & trading** for each relevant corporate action event type and whether or not there are possibilities to reduce and standardise the timeframe.

9. Multi-Currency Settlements

Explore the benefits of having a **multi-currency capability** and how settlement in non AUD instruments could operate.

10. Settlement messages

Explore the use of various settlement messages and determine whether or not some could be made **optional instead of mandatory**.

5. Structure of working groups

ASX is proposing to hold three workshops covering the topics below, with an additional workshop included in case not all the topics have been covered or additional time is required to follow up on any parked items.

The questions raised in this paper are for the purpose of generating thoughts for discussion and to help Participants solicit feedback from colleagues to ensure attendees are prepared to represent their organisation's point of view. The questions may not necessarily be raised in the workshop.

5.1. Workshop 1 - Settlement Optimisation/Optionality

- a) Legal Name on Title
 - i. Locking Broker Sponsored holdings (until settlement day)
 - ii. Locking Issuer Sponsored holdings (until settlement day)
 - iii. Removal of the Accumulation Entrepot account
- b) Early / Flexible Settlements

5.2. Workshop 2 – Settlement Efficiencies

- a) Bilateral Settlements
 - i. Additional batch (Line for line settlement)
 - ii. Tolerance models for matching settlement amounts
- b) Linking Bilateral Settlements (Off-market) to Net Broker Obligations
- c) Matching criteria for Free of Payment (FOP) and Bilateral Settlements
- d) CHES processing when batch is running

5.3. Workshop 3 – Settlement Miscellaneous

- a) Deferred Trading and Settlement
- b) Give Ups / Take Ups
- c) Multi-currency Settlements
- d) CHES settlement messages (Mandatory or Optional)

5.4. Workshop 4 - TBD

6. Workshop 1 - Settlement Optionality

6.1. Legal Name on Title

Currently to ensure the Participant has control of the securities required for settlement, they will transfer the clients broker sponsored / issuer sponsored stock into their accumulation entrepot account in preparation for settlement.

The Participant will then schedule a MT107 to move the securities into their settlement entrepot account at the commencement of batch on the day of settlement, together with the transfer of the associated trust monies being moved into the Participants trust bank account.

Potential functionality for consideration

6.1.1 Locking Broker Sponsored holdings (until settlement day)

By having the ability to instruct a MT107 message to send the client's "Broker Sponsored" securities directly to the Participants settlement entrepot account (including locking and validating the holding), there would be no need to transfer the securities into the Participants accumulation entrepot account. This would mean that the securities would remain in the clients name until settlement on T+2 thereby reducing corporate action claims and potentially reduce Cash Market margins.

For those Participants using the MT107 message to offset incoming deliveries in the settlement batch, the validate and lock process would be optional.

6.1.2 Locking Issuer Sponsored holdings (until settlement day)

Likewise, by having the ability to send a message to the issuer sponsored register to be able to validate and lock a client's "Issuer Sponsored" securities for delivery directly to the Participants settlement entrepot account on the morning of settlement, there would be no need to transfer the securities into the Participants accumulation entrepot account. Once again, this would mean that the securities would remain in the clients name until settlement on T+2 thereby reducing corporate action claims, reducing counterparty exposures and potentially reduce Cash Market margin.

6.1.3 Removal of the Accumulation Entrepot Account

By the introduction of the above two enhancements it would remove the requirement to have an accumulation entrepot account and the requirement to perform the associated daily reconciliations.

Questions to generate thought and discussions in the workshops

1. In the absence of being able to lock issuer sponsored holdings, would you see any benefit in only locking broker sponsored holdings?
2. Are there any alternatives to the above for supporting investor protection and/or process efficiencies?

6.2. Early / Flexible Settlements

Currently all cash equity trades are netted at the end of the trade date into a Net Broker Obligation per security which is then scheduled for settlement through the CHES batch process on trade date +2 (T+2).

CHES achieves DvP settlement through a Model 3 multilateral net batch settlement mechanism. This batch settlement commences at 11:30am and completes at around 12:30pm each day and involves the determination of each Participant's net funds and security delivery obligations.

The netting process maximises the efficiency of settlement by:

- Netting settlement obligations (buys and sells) for each individual security into a single net buy or sell, and
- Netting all payment obligations (payments and receipts) into a single net pay or collect.

It does this while minimising the risk of settlement failing.

Through the batch process, funds are transferred between each Participant's payment providers using the Reserve Bank of Australia's Information and Transfer System (RITS). Once completed, this triggers the movement of securities from delivering Participants settlement entrepot account to the receiving Participants settlement entrepot account within CHES.

These multilateral payment netting arrangements, which are key to the settlement efficiency of the system, are approved under the Payment Systems and Netting Act.

Potential functionality for consideration

While ASX will maintain T+2 (11:30am) as the default settlement period, there is potential for the new system to be configured with the capability to offer customers shorter settlement periods. As such, Market Participants could be offered the ability to choose to settle their trades intraday, end of trade date or T+1. Settlement optionality may provide Participants with greater ability to reduce exposures and associated margin.

Securities lending and financing facilities will be required to support settlement optionality and ASX could act as a facilitator by providing the connectivity to third party liquidity providers for an escrow service which maintains legal ownership until conditions have been met to transfer the units to the buyer.

Example: selling client has opted to utilise settlement optionality

Step 1:

- The system will determine if the market has a buy settlement obligation which can satisfy the seller's preference to settle early on their preferred settlement date and time

Step 2:

- If a buyer has been identified, the settlement obligation can enter the next settlement cycle as a gross settlement
- If a buy settlement obligation has not been identified, a check is required to determine if there is a desire for financing to allow the seller to settle early

Step 3:

- If there is no desire for financing, the sell settlement obligation will enter the default T+2 settlement cycle
- If there is a desire for financing, the liquidity provider receives and accepts the request from ASX for cash liquidity to finance the seller's settlement obligation

Step 4:

- A new settlement obligation is created between ASX, and the financier
- As part of the settlement cycle, the units will be transferred from the early seller to the financier and ASX will hold the units as collateral on behalf of the financier

Step 5:

- On T+2, the units are transferred from ASX into the settlement cycle by settling the liquidity providers contract

Questions to generate thought and discussions in the workshops

1. Would you want to provide your clients with the ability to settle before T+2?
2. If "No," why not?
3. If "Yes" and your client was selling and the other side did not want to settle early, would you pay a premium to be able to finance the transaction?
4. Likewise, if "Yes" and your client was buying and the other side did not want to settle early, would you pay a premium to be able to borrow the securities?

7. Workshop 2 – Settlement Efficiencies

7.1. Bilateral Settlements

Bilateral settlement transfers are processed through the daily batch settlement cycle and matching instructions (within a pre-defined tolerance) must be received from the deliverer and receiver by no later than the batch settlement cut off time, 11:30am on the day of settlement.

Bilateral settlement notifications (MT101) are used for the following transactions:

- On market settlements from Custodians
- Free-of-payment off-market settlements
- Settling other classes of transactions such as "allocation interests" for primary market facilities (PMFs) admitted under the ASXS Settlement Operating Rules
- Miscellaneous payments related to certain other transactions made under ASXS Settlement Operating Rules
- Settling non-ASX listed transactions

7.1.1 Additional batch (Line for line settlement)

While ASX will maintain T+2 (11:30am) as the default settlement period, through the consultation process several Participants indicated that a post settlement process after the 11:30am batch process would facilitate the movement of securities and cash for things such as late settlements and stock borrowing & lending etc.

Questions to generate thought and discussions in the workshops

1. Would an additional settlement process in the afternoon for line by line settlements be an advantage?
2. If "Yes", what type of transactions would you see being settled through this process?
3. Given banking deadlines, what is the latest time you think that this process could run?

7.1.2 Tolerance models for matching settlement amounts

Bilateral settlement notifications, with a monetary value attached, are matched in CHES by settlement amounts within a three-tiered model of settlement tolerance.

- **Tier 1**
All bilateral settlement notifications with settlement amount equal to or below \$499,999.99, CHES will match within a \$1.00 settlement tolerance limit;
- **Tier 2**
All bilateral settlement notifications with settlement amount from \$500,000.00 to \$999,999.99 will match within a \$10.00 settlement tolerance limit; and
- **Tier 3**
All bilateral settlement notifications of settlement amount \$1,000,000.00 or greater will match within a \$20.00 settlement tolerance limit

Where both settlement amounts of the notifications fall within a tier given above, as per the current matching rules, the settlement amount of the resulting transaction will be the lower of the two settlement amounts received on the two notification messages.

In the event the settlement amounts of the bilateral notifications sit across the \$500,000.00 or the \$1,000,000.00 thresholds, the tier of settlement tolerance applied by CHES is determined by the settlement amount of the first notification message received. If the transaction is matched according to the appropriate settlement tolerance tier, the settlement amount of the transaction will be the lower of the settlement amounts received on the two notification messages.

The following table illustrates the tier model with some examples:

First Settlement Amount	Second Settlement Amount	Tier	Tolerance Amount	Settlement Amount
\$550,668.25	\$550,676.50	2	\$10.00	\$550,668.25
\$10,550.85	\$10,550.00	1	\$1.00	\$10,550.00
\$1,000,019.80	\$ 999,998.20	3	\$20.00	Unmatched
\$1,000,019.80	\$ 999,999.80	3	\$20.00	\$999,999.80
\$499,985.00	\$500,005.00	1	\$1.00	Unmatched
\$ 999,998.40	\$1,000,017.30	2	\$10.00	Unmatched

Questions to generate thought and discussions in the workshops

1. Does the existing tolerance model support current needs?
2. Should the tiers be maintained or reviewed?

7.2. Matching criteria for Free of Payment (FOP) and Bilateral Settlements

When two Participants move financial products, both are required to notify CHES of the details. However, there is no requirement for Participants to uniquely identify the transaction and CHES does not match on this basis.

CHES matches bilateral transfers on the following data items:

- Security code
- Settlement date
- Counterparty PID
- Units
- Basis of movement (default or override)

- Transaction basis
- Settlement amount (value (DvP) transactions only)*
- Trade date (for value (DvP) market transactions only)
- Foreign Guaranteed Indicator

**within the settlement tolerance amount*

If one of the Participants indicate that the settlement instruction must **not** be part-settled, the settlement instruction will not be part-settled.

When two or more transactions have identical values in the matchable fields, the possibility exists that CHES will not match one Participant's transaction to their counterparty's transaction.

Questions to generate thought and discussions in the workshops

1. Does the existing matching criteria support current needs?
2. Should the matching criteria be maintained or reviewed?

7.3. Linking Bilateral Settlements (Off-market) to Net Broker Obligations

Through the consultation process several Participants indicated that there was a potential benefit to linking a bilateral settlement to its associated Net Broker Obligation where relevant. If you could take this idea one step further and be able to lock and validate the securities associated to the bilateral settlement, then this could potentially reduce counterparty exposure and Cash Market margin for the Clearing Participant.

Questions to generate thought and discussions in the workshops

1. Would you see a benefit in linking a bilateral settlement to the associated NBO?
2. Would you see any issues with validating and locking the securities associated to the bilateral settlement?

7.4. CHES processing when batch is running

Several stakeholders suggested that having the ability to process certain messages while the batch settlement process is running would be beneficial.

Questions to generate thought and discussions in the workshops

1. What messages would you like to be able to process while the batch settlement is running?
2. What would be the benefits from being able to process these messages?

8. Workshop 3 – Settlement Miscellaneous

8.1. Deferred Trading and Settlement

In earlier workshop discussion in the Corporate Actions Working Group, the importance of the period of Deferred Settlement Trading was discussed where liquidity (continuous trading) is provided for financial products, offered under a corporate event, that are still to be issued. Any trades conducted on the relevant security during the deferred settlement period will not be settled until three business days after the issue date.

In the workshop discussion, Participants have raised two main topics:

- i. Length of the timetable
- ii. Allotment process of new securities

It was agreed to park the topics on Deferred Settlement Trading until the Settlement Enhancement workshop to allow for ASX to map the deferred settlement periods **Appendix B** to the existing ASX Corporate Actions **Appendix A** and therefore have a more in-depth discussion.

Questions to generate thought and discussions in the workshops

1. What are the current issues with having different deferred settlement periods for each Corporate Action type?
2. What are the benefits from having a standardised deferred settlement period?

8.2. Give Ups / Take Ups

Through the consultation process several Participants indicated that there was a potential benefit in being able to "Give Up" a transaction to a different clearer (other than the Participants default clearer).

Questions to generate thought and discussions in the workshops

1. Would you see a benefit in being able to "Give Up" a transaction to a different clearer (other than your default clearer)?
2. On a monthly basis, how many estimated transactions would use this functionality?

8.3. Multi-currency Settlements

Through the consultation process several Participants indicated that there was a potential benefit in being able to settle multi-currency settlements through the batch settlement process.

Questions to generate thought and discussions in the workshops

1. What type of multi-currency settlement would you see being facilitated through the batch settlement process?
2. On a monthly basis, how many estimated transactions would use this functionality?

8.4. CHES settlement messages (Mandatory or Optional)

Through the technical sub-committee the question was raised as to whether or not certain settlement messages were required to be mandatory or could they be made optional.

The below table contains the messages in question and their current purpose.

CHES Message	Purpose
MT164	Notifies Clearing Participants that a trade has been registered as a settlement obligation in the clearing and settlement system.
MT138	Notifies Clearing Participants that novation of the settlement obligation has occurred. Under novation the original trade between the Trading Participant representing the buyer and the Trading Participant representing the seller is discharged and replaced with two new contracts: one between ASX Clear and the Clearing Participant representing the buyer, and the other between ASX Clear and the Clearing Participant representing the seller.
MT134	Notifies the Clearing Participant the Net Broker Obligation (NBO). Netting is the process whereby CHES amalgamates all settlement obligations (MT138) by security and settlement date, to create one obligation, NBO, whereby the Clearing Participant is due to deliver or receive one net position.
MT156	Notifies the Clearing or Settlement Participant that the settlement obligation (as represented by either MT164, MT138, or MT166) has settled.

Questions to generate thought and discussions in the workshops

1. Are any of the above CHES messages not used by your system?
2. If "Yes," please advise why?

3. Would you see a benefit in making any of these messages optional?
4. Are there other messages you think should be considered?

9. Workshop 4 – To Be Determined

This workshop will be used to address any topics not completely covered in the previous three workshops.

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10. Appendix A – ASX Corporate Actions

#	Corporate Action Event Type ¹	% of events (Annual sample)	Corporate Action Event Category	Product Types	Lifecycle of a Corporate Action Event								Comment (reflects current state)
					Notification (ReferencePoint) Event or Text only  	Facilitated Election or Acceptance   	Cum Entitlement Balance	Diary Adj	Facilitated Payment by Holders 	Facilitated Payment by Issuers 	Facilitated Pre Allotment Notification 	Additional Quotation / Adj to # Securities on Issue	
1	Dividend (Cash only)	52%	Mandatory	Equity products ²	Event	N/A	✓	✓ Value	N/A	★	★	N/A	
2	Dividend (Dividend Reinvestment Plan)		Mandatory	Equity products ²	Event	★	✓	✓ Value	N/A	★	★	✓	Also includes Bonus Share Plans (BSP) Potential additional quotation for both DRP and BSP.
3	Dividend (Mandatory scrip delivery)		Mandatory	Equity products ²	Event	N/A	✓	✓ Value	N/A	N/A	★	✓	
4	Interest payment	6%	Mandatory	Interest Rate products ³	Event	★ For options	✓	✓ Value	N/A	★	N/A	N/A	Could include options such as payment in foreign currency
5	Return of Capital (cash)	1%	Mandatory	Equity	Event	N/A	✓	✓ Value	N/A	★	N/A	N/A	
6	Reconstruction, Splits and Consolidations	4%	Mandatory	Equity	Event	N/A	N/A	✓ Accrual	N/A	N/A	★	✓	Number of securities held by investor will change
7	Return of Capital (securities-in-specie and processed by ASX as a bonus offer)	Not Available	Mandatory	Equity	Event	N/A	✓	✓ Accrual	N/A	N/A	★	✓	If the consideration of an offer includes securities in the bidder (or the bidders listed parent) and the bidder is listed then additional securities will indeed need to be issued and quoted.
8	Bonus entitlement offer (including attaching option)	0.5%	Mandatory	Equity	Event	N/A	✓	✓ Accrual	N/A	N/A	★	✓	
9	Issuer Name and Code change	6%	Mandatory	All	Event	N/A	N/A	✓ Code change	N/A	N/A	N/A	N/A	CHESS facilitation: CHESS consumes the corporate action event record and performs a code change against CHESS holdings and open settlement obligations.
10	Security code change (class merger)	1%	Mandatory	All	Event	N/A	N/A	✓ Code change	N/A	N/A	N/A	N/A	CHESS facilitation: CHESS converts settlement obligations for security class mergers related to the following examples: - Where deferred settlement trading is part of a corporate action event, and the deferred settlement security code merges back to an existing security code; and - Where a non-ranking security (e.g. securities issued under a DRP) is merged with an existing security once equal ranking is confirmed by the issuer.
11	Conversion (company option expiry)	4%	Voluntary	Company option	Event	★	N/A	✓ ASX (Manual)	★	N/A	★	✓	CHESS facilitation: CHESS consumes the corporate action event record and automatically closes the CHESS sub register for the expiring or converting security on the record date. CHESS will apply a code change (class merger) against any deferred settlement trading activity where applicable.
12	Conversion (convertible securities)		Mandatory	Convertible notes	Event	★	N/A	✓ ASX (Manual)	N/A	N/A	★	✓	Potential for the Issuer to offer choice on the conversion parameters
13	Off Market Buy Back (Equal Access)	3%	Voluntary	All	Event	✓	✓	N/A	N/A	★	N/A	✓	CHESS facilitation: Creation of acceptance codes related to sub position architecture.
14	Protection unavailable (ex-rights of exercise)	Not Available		All	Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
15	Non-Renounceable (attaching options)	9%	Voluntary	All	Event	★	✓	✓ Accrual	★	N/A	★	✓	
16	Non-Renounceable (accelerated offers)		Voluntary	All	Event	★	N/A	✓ Accrual	★	N/A	★	✓	
17	Renounceable (attaching options)		Voluntary	All	Event	★	✓	✓ Accrual	★	N/A	★	✓	
18	Renounceable (accelerated offers)		Voluntary	All	Event	★	N/A	✓ Accrual	★	N/A	★	✓	
19	De-merger (domestic/foreign)	Not Available	Voluntary	All	Event	★	TBC	TBC	★	N/A	★	✓	Requirement to investigate use of Cum Entitlement Balance and Diary adjustments or other CHESS support. De-merger (foreign) is where the shares are issued in a foreign country

#	Corporate Action Event Type ¹	% of events (Annual sample)	Corporate Action Event Category	Product Types	Lifecycle of a Corporate Action Event								Comment (reflects current state)
					Notification (ReferencePoint) Event or Text only  	Facilitated Election or Acceptance   	Cum Entitlement Balance	Diary Adj	Facilitated Payment by Holders 	Facilitated Payment by Issuers 	Facilitated Pre Allotment Notification 	Additional Quotation / Adj to # Securities on Issue	
20	Call on partly paid securities	<1%	Mandatory	Partly paid	Event	★	N/A	✓ Value	★	N/A	★	✓	CHES facilitation Market Protection procedures and the treatment of calls, as determined by the ASX Operating Rules, vary considerably between "limited" and "no liability" (NL) companies. The major difference between the two is the treatment of outstanding settlement obligations, which are subject to a call payment: - with respect to a Limited company the call payment to be made by the investor is compulsory. As a result the associated corporate action event comprises a diary adjustment which represents the call payment - with respect to a N.L. company the call payment to be made by the investor is not compulsory. As a result the associated corporate action event does not comprise a diary adjustment which represents the call payment
21	Rollover (warrants)	5%	Mandatory with choice	Warrants	Event	X	X	✓ Recon	X	X	X	X	Reconstruction events are used for Warrant resets.
22	Priority Offer	1%	Voluntary	All	Event	★	✓	X	★	N/A	★	✓	CHES facilitation: CHES consumes the corporate action record and creates cum-entitlement balances only. No diary adjustments are performed. (similar processing to Off market buy back) If the consideration of an offer includes securities in the bidder (or the bidders listed parent) and the bidder is listed then additional securities will indeed need to be issued and quoted.
23	Off-Market Takeover (Cash and/or Securities)	2%	Voluntary	All	★ Event	✓	N/A	N/A	N/A	★	★	✓	Non-structured textual information included in ReferencePoint products Daily Diary, Weekly Summary. CHES facilitation: CHES (manual) creation of acceptance codes related sub position architecture. If the consideration of an offer includes securities in the bidder (or the bidders listed parent) and the bidder is listed then additional securities will indeed need to be issued and quoted.
24	On-Market Takeover Bid		Voluntary	All	★ Event	N/A	N/A	N/A	N/A	★	★	✓	Non-structured textual information included in ReferencePoint products Daily Diary, Weekly Summary. CHES facilitation: CHES processing is similar to on-market buy-backs.
25	Scheme Of Arrangement		Mandatory	All	★ Event	X	X	X	X	X	X	X	X
26	Share Purchase Plan	5%	Voluntary	Equity	★ Event	X	X	X	X	X	★	X	Non-structured textual information included in ReferencePoint products Daily Diary, Weekly Summary.
27	On Market Buy Back	Not Available	Voluntary	All	★ Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Non-structured textual information included in ReferencePoint products Daily Diary, Weekly Summary.
28	Proxy Voting	Not Available	Voluntary	Equity	★ Event	★	N/A	N/A	N/A	N/A	N/A	N.A	

¹ Event coverage includes listed/quoted products ² Equity products (CHES eligible) – including shares, units in trusts, ETFs, preference securities, warrants; company options for some events

³ Interest rate products (CHES eligible) – including fixed + floating notes, bonds, convertible notes

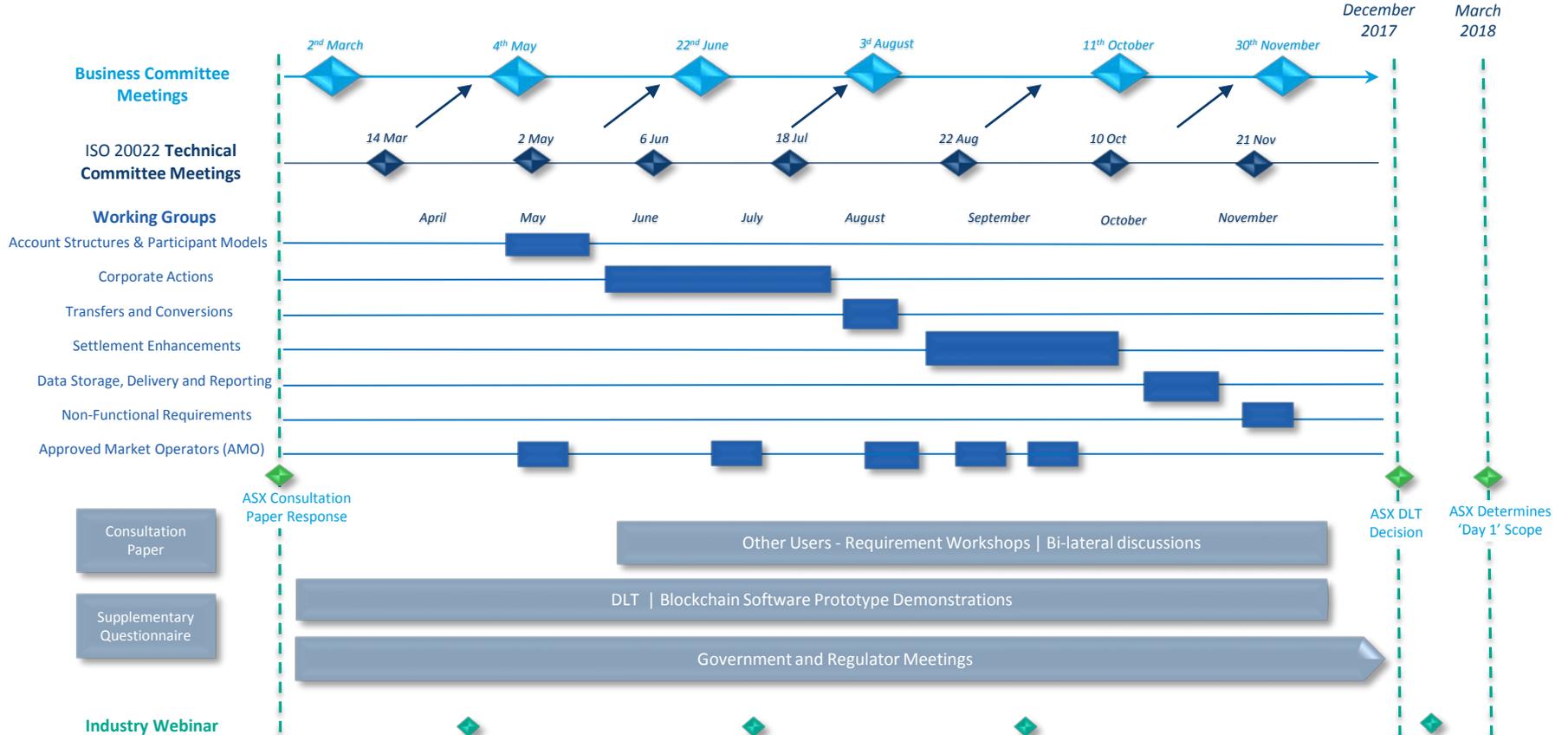
★ Business requirement already raised to address the potential enhancement of this feature

11. Appendix B – ASX Listing Rules – Corporate Actions Deferred Settlement Periods

ASX Listing Rules (Appendix 6A and 7A)	Listing Rule Appendix	ASX Corporate Action table	Deferred Settlement Trading Day Start ¹	Deferred Settlement Trading Day End ¹	Time limits for the end of deferred settlement trading	Deferred Settlement Period Business Days
Dividend and Distributions	6A	#1,2 & 3 Dividend	N/A	N/A	N/A	N/A
Interest payment on quoted debt securities	6A	#4 Interest Payment	N/A	N/A	N/A	N/A
Calls (No Liability Companies)	6A	#20. Call on partly paid securities	N/A	N/A	N/A	N/A
Calls and Instalments (entities except NL companies)	6A	#20. Call on partly paid securities	22	35	No more than 5 business days after the due date for payment	13
Conversion or Expiry of Convertible Securities	6A	#12 Conversion (convertible securities)	17	35	Not more than 15 business days after the conversion or expiry date	18
Bonus	7A	#8 Bonus entitlement offer (including attaching option)	3	14	No more than 10 business days after record date	11
Pro rata (Non-Renounceable)	7A	#15 Non-Renounceable (attaching options)	14	18	Unless ASX agrees otherwise, no more than 5 business days after offer closes	4
Pro rata (Renounceable)	7A	#17 Renounceable (attaching options)	9	18	Unless ASX agrees otherwise, no more than 5 business days after applications closing date	9
Accelerated Non-Renounceable Entitlement offers	7A	#16 Non-Renounceable (accelerated offers)	N/A	N/A	N/A	N/A
Accelerated Renounceable Entitlement offers and simultaneous Accelerated Entitlement offer	7A	#18 Renounceable (accelerated offers)	N/A	N/A	N/A	N/A
Accelerated Renounceable Entitlement offers with retail rights trading	7A	#18 Renounceable (accelerated offers)	2	6	Not more than 4 business days after the record date	4
Reorganisation of Capital (No court approval)	7A	#6 Reconstruction, Splits and Consolidations	2	8	6 business days after trading in the reorganised securities on a deferred settlement basis starts	6
Reorganisation of Capital (Court approval)	7A	#6 Reconstruction, Splits and Consolidations	1	7	6 business days after trading in the reorganised securities on a deferred settlement basis starts	6
Issue Dates	7A	N/A	0	15	An entity must follow this timetable for an issue of securities unless: <ul style="list-style-type: none"> • The securities will not be quoted; • An issue date is specified in another timetable in these rules, or • ASX specifies a different time limit No more than 15 business days after final applications closing date	15
Equal Access Schemes	7A	#25 Scheme of Arrangement	N/A	N/A	N/A	N/A
Security Purchase Plan	7A	N/A	N/A	N/A	N/A	
Transfer of securities (S.444 GA) (Deed of Company arrangement)		N/A	10	14	Deferred Settlement trading will end 4 business days after trading in the securities commences on a Deferred Settlement basis.	4

¹ Reference to the Business Day number in the corporate action timetable; e.g. Day 22

User Engagement Plan - 2017



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 4B

Topic	Technology Assessment of Digital Asset's DLT platform
Date	11 October 2017
Purpose of this paper	Members will be provided with an update on the technology assessment of Digital Asset's DLT platform

OVERVIEW

The ASX embarked on a global search for a suitable partner in the distributed ledger technology (DLT) space in late 2015 resulting in the selection of Digital Asset (DA).

ASX commissioned DA to develop a Proof of Concept (POC) implementation to demonstrate that their technology was safe and suitable for larger scale and more complex problems relevant to the Australian market. A successful POC implementation resulted in ASX engaging DA for an 18 month production strength build of the critical clearing and settlement functions currently performed by CHES. This is the current phase of the project.

As previously stated, it should be noted that this phase of the project is to facilitate a decision by ASX in December whether to use a DLT-based platform developed by DA to replace CHES. It does not yet incorporate prioritised business requirements that are currently subject to consultation.

Development Locations

The ASX team is Sydney based and is co-located with one of DA teams.

The DA team is globally distributed with significant and fully cross functional Sydney presence required to support the CHES Replacement project. DA are also based in New York, Zurich, Budapest, and London. The Sydney team are the primary resources for the CHES Replacement implementation.

Project Governance

The project is subject to ASX's normal internal project governance framework.

This framework includes oversight of project management practices and adherence to a Service Level Agreement (SLA) with DA.

ASX and DA hold regular executive and project management status updates. ASX and DA conduct joint and separate meetings to support the Agile SCRUM delivery model and to support effective communication, collaboration, and governance of the streams of work. Key aspects are described in the following sections.

Project Streams

There are multiple streams of project activity within the CHES replacement project one of which relates to software development and assessment.

Requirements and Stakeholder Engagement

Inputs to business requirements are being gathered from within the ASX and from the industry via an extensive external stakeholder engagement process. Requirements elicited from stakeholders are being added to a project backlog and are prioritised for detailed elaboration based on the evolving project delivery priorities.

ASX requirements are captured under the following categories: Actor (Users)

- Asset (Securities)
- Trade Registration
- Netting
- Settlement Preparation
- Settlement
- Corporate Actions
- Clearing
- Holding Management
- Default Management
- mFund
- Billing
- Reference Data
- Administration
- Technical Requirements
- Non Functional Requirements

These requirement categories are being elaborated with increasing levels of fidelity and these are supported by comprehensive testing scenarios that take the form of 'given/when/then' statements.

ISO 20022 Messaging

International Standards Organization (ISO) messaging is being defined in conjunction with Society for Worldwide Interbank Financial Telecommunication (SWIFT) and the industry through the ISO 20022 Technical Committee in order to ensure that an open international standard is adopted to replace CHES messaging. This open standard also provides for an effective and technology agnostic interoperability interface to the system. The requirements process is acting as an input to the ISO 20022 stream message definitions.

DLT System Build with DA

The scope of the software build for 2017 has been selected by ASX to test DA's ability to produce high quality software in a predictable and repeatable fashion.

ASX is also building adaptors for DA's software in ASX's test environments to ensure compatibility with ASX's other systems, external exposure capability and infrastructure environments.

The DA system comprises a generic core application upon which specialised modules can operate.

The specialisations for ASX includes trade registration, clearing, and settlement capabilities.

The DA system is being built and delivered incrementally. This is aligned with the agreed agile and iterative approach to the system build. Bidirectional feedback between the requirements definition and the build streams results in the prioritisation of work to minimise risk and wasted effort.

Software Delivery Model

ASX and DA are specifying and building the software using a lean agile process.

DA are building their software in fortnightly sprints and are delivering the software to the ASX on an agreed milestone basis which is typically every 2 sprints.

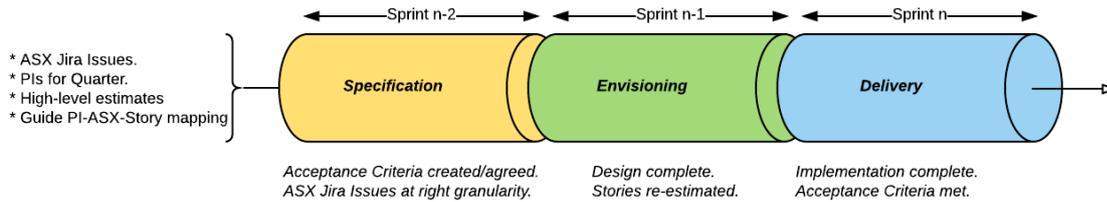
ASX has aligned its requirements and scenario specification generation to 'front run' DA's build. This means that the ASX are delivering the requirements in time to meet the 'Definition of Ready' for DA to include the detailed requirements and scenarios in their next build sprint.

In parallel, DA and the ASX are also developing complete test automation capabilities in order to improve the efficiency and quality of regression testing and maintain a highly reliable and frequent software release cycle.

Agile SCRUM ceremonies are being conducted by both DA and ASX to ensure the team is working as effectively as possible.

A project backlog of requirements is continuously groomed by ASX and DA to increasing levels of fidelity in order to be able to make informed prioritisation decisions and to have them available for the DA build sprint in time.

Requirements Delivery for Build



ASX's detailed requirements and scenarios are provided to DA at least 2 weeks in advance of a build sprint in order for DA to design and estimate for their globally distributed build team.

A key benefit is that the project is able to adapt and take feedback into account as the project progresses. This is in contrast to a waterfall approach where requirements are predefined in their entirety before the design and build begin. The cost of changing or accommodating new requirements in a waterfall project is much higher than an agile approach and leads to behaviour where change is avoided or is only accommodated at much higher expense and disruption to the delivery.

Notwithstanding the use of a lean / agile project process, ASX and DA have overlaid an agreed formal change management process to ensure that relevant contractual agreements are honoured.

Technology Milestones to Dec 2017

ASX agreed to a schedule of checkpoint, infrastructure and software release dates with DA in order to measure incremental progress and inform ASX's decision of whether DA and their solution will be chosen to replace CHES.

DA have successfully delivered to all ASX checkpoints and met all SLAs to date.

Technology Assessment Process

77 ASX and DA requirement and software development sprints will have been completed by December 2017. This will result in 12 incremental software releases (not including patch releases); 8 of these have been delivered to date. The aggregate of these releases will provide ASX with sufficient production grade working software, specific to ASX's requirements to perform functional and non-functional tests. The results of these tests will be an input to ASX's CHES replacement technology decision.

ASX has defined functional requirements and their associated tests based on the core functionality of CHES. The non-functional requirements and tests are based on industry standards, inclusive of alignment to relevant financial stability standards (FSS), and forecast throughput and capacity thresholds required for market growth.

DA will also be assessed as a going concern and long term provider of software to ASX.

Software Testing Results

DA have delivered software into ASX's physical infrastructure in Australia on time as per the agreed schedule. Testing pass rates on this software have been high. That is, software defect counts (or bugs) are low. Where defects have been identified, they are triaged and prioritised for fix and release.

Only two inter-release patches have been required.

Defects are raised and managed in a shared JIRA instance. These are reviewed and prioritised weekly with the bugs being resolved in priority order within the timeframe dictated by the SLA agreed between the ASX and DA.

As of October the testing focus is skewing to non-functional requirements (NFRs).

These NFR tests are required to be satisfied while the system is executing real-world scenarios contained in the core functionality DA has developed. This means that the system is being evaluated on a realistically complex functional base. This is in contrast to the execution of simple work flows or single transactions in 'bench test' environments.

Results to date indicate that DA's platform will be able to meet the non-functional requirements for 2017.

Independent Third Party Expert Platform Security Review

In addition to ASX's assessment of DA's DLT system two independent expert firms have been engaged to perform assessments of the technology.

These two firms are:

1. NCC Group – a cyber security and risk mitigation specialist - www.nccgroup.trust
2. KPMG – a technology audit and assurance specialist – www.kpmg.com KPMG's review will include the involvement of CSIRO's DATA61 team.

These firms have specialist skills and experience in the assessment of software, cryptography and systems architecture.

The scope of these reviews focuses on those elements of DA's software and its architecture relating to the security and the integrity claims of the solution.

These assessments will be on the cryptographic methods used and their unique assembly through DA's system architecture.

These reviews will be completed and the findings will form part of the assessment and decision of DA's DLT platform.

High level outcomes from these reviews will be made available to the Business Committee.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 4C	
Topic	ISO20022 Technical Committee Report and Minutes
Date	11 October 2017
Purpose of this paper	To provide Business Committee members with a copy of the report and minutes from two recent meetings of the ISO 20022 Technical Committee.

OVERVIEW

The ISO 20022 Technical Committee met on 18 July and 22 August 2017.

A copy of the Technical Committee's reports and meeting minutes are provided in Attachments A and B

ATTACHMENTS

Attachment A – ISO 2022 Technical Committee Report and Minutes 18 July 2017 meeting.

Attachment B – ISO 2022 Technical Committee Report and Minutes 22 August 2017 meeting.



ISO 2022 TECHNICAL COMMITTEE REPORT TO THE BUSINESS COMMITTEE

ISO 2022 TECHNICAL COMMITTEE MEETING 18 JULY 2017

The Technical Committee met on 18 July in Sydney.

MEETING AGENDA (NON STANDARD ITEMS)

Business and Technical Matters for Consideration:

- Review of initial report candidates for descope;
- Review of member comments and feedback on the draft ISO 2022 equivalents of CHES EIS 146, 156, 170, 542 messages;
- Overview of date and time considerations;
- Further review of the cancel/correct or maintenance of settlement instructions;
- Overview of free of delivery (FOD) / Miscellaneous payments;
- Overview of Transaction ids;
- Further ISO 2022 usage guidelines available for member review (EIS 015, 174, 405, 407, 408, 426, 016, 076, 107, 106; and samples of simplified guidelines for EIS 134 and 138)); and
- A discussion regarding noted action items and next steps for the Committee.

KEY ISSUES DISCUSSED

- The Chair noted that of twelve open action items, five had been actioned and were noted as closed, or for discussion at the meeting and subsequently closed. Seven action items remained open.
- ASX noted that 3 members had reviewed the latest usage guidelines published by ASX on SWIFT MyStandards. A number of comments, queries were raised during the meeting about the functionality and use of MyStandards with ASX and SWIFT agreeing to follow up and provide feedback to members. It was acknowledged it was important to ensure the publishing and review processes worked effectively. Additionally ASX responded to members' requests to provide additional detail on comparative CHES EIS vs ISO 2022 message flows in the relevant presentation material provided at each meeting, and the inclusion of transaction id references.
- ASX referred to previous discussions by the committee on the proposed descope of redundant or disused CHES reports. ASX proposed an initial tranche of five reports for descope, with endorsement provided by the committee. ASX confirmed it would continue to review remaining reports and bring further descope recommendations to the committee.



- Following discussion at the prior meeting, ASX tabled a revised recommendation to remove functionality of the CHES EIS 121 message only (bilateral changes to settlement messages, and not remove usage of the unilateral message). This is a narrowing of the options currently available in CHES, due to limitations in ISO 20022 to support change requests to settlement messages. Review of the recommendation was carried forward pending one member's review of their own usage of the EIS 121 message.
- Discussion continued at the meeting on the considerations to simplify date and time formats across the message set, including inbound and outbound messages. Members were asked to consider the ramifications for their own organisations, with discussion to continue at the next meeting.
- The committee endorsed ASX's recommendation to not include an equivalent miscellaneous payments function in the equivalent ISO 20022 message to the CHES EIS 101 message, given the ISO 20022 standards did not allow for both security and cash settlement in a single message set. ASX agreed to raise an item at the CHES Replacement settlement working group regarding market need for a miscellaneous payment functionality.
- Discussion on the model for transactions ids in CHES Replacement continued in the meeting, with ASX providing an overview of the as-is approach and provision of an additional unique transaction id through a transaction flow. The meeting noted an action to continue discussion at the following meeting with an overview to be provided by ASX and SWIFT on other market implementations.

AGREED ACTIONS

Three new action items were noted from the meeting, with a total of ten open action items. The action items are detailed in full in the Minutes from the meeting.

Minutes from the meeting are attached.



MINUTES OF THE ISO 20022 TECHNICAL COMMITTEE

Tuesday 18 July 2017

ASX Offices, Bridge Street, Sydney; Webinar

1. Welcome, Agenda
2. Minutes from last meeting, open actions
3. CHES Replacement project update by ASX
4. ISO 20022 project update by ASX
5. Update from Business Committee
6. Matters for Consideration (Business and Technical matters)
 - 6a Initial report candidates for descope (Action item 23)
 - 6b MyStandards Community - usage guideline feedback – settlement messages
 - 6c Date and time considerations (Action item 30)
 - 6d Cancel/Correct or Maintain of settlement instructions (Action item 32)
 - 6e Free of Delivery (FOD) / Miscellaneous payments
 - 6f Overview of Transaction ids (Action item 34)
 - 6g Usage guidelines for review – transfers & further settlement usage guidelines
7. Next meeting

ATTENDEES

MEMBERS		
Company	Name	Job Title
Australian Payments Network Limited	Andy White	Chief Operating Officer
Australian Payments Network Limited	Paul Creswick	Security Standards Manager
Bank of America Merrill Lynch	Andree Hindmarsh	Head of GMOT Australia
Bank of America Merrill Lynch	Jimmie Alam	
Bell Potter Securities	Dean Surkitt	Managing Director Retail
BNP Paribas Securities	Narelle Rutter	Head of Local Custody & Clearing Operations
BNP Paribas Securities	Wayne Murphy	Project Manager
Boardroom Limited	Tony Robinson	Senior Software Engineer
Boardroom Limited	Michael Mullins	CIO
Broadridge (Australia)	John Greenhow	General Manager, Australia
Broadridge (Australia)	Manoj Mathew	Business Analyst
Broadridge (Australia)	Mabel Chow	Development and Support Manager
CBA Equities	Joel Cox	Technical Business Analyst
CBA Equities	Carolyn Webb	Test Manager
CBA Equities	Ben Lowe	Manager Settlements
Chi-X Australia	Mike Aikins	Head of Solution Development
Chi-X Australia	Suketu Adhvaryu	Senior Solution Architect
Citicorp	Miles O'Connor	Director, Direct Custody & Clearing Securities Markets & Securities Services
Citicorp	Brett Dennis	Head of Operations – Party Clearing
Citicorp	Vlad Medvedev	
Citicorp	Lyall Herron	
Citicorp	Janice O'Brien	Markets & Securities Services Technology
Citicorp	Matthew Warner	
Citicorp	Ashok Kumar Balusa	
Citicorp	Glenn Pahilan	
Computershare	Paul Walton	Senior Manager, Corporate Actions & New Business Development – Investor Services
Computershare	Leanne Bailey	Senior Business Analyst Product & Innovation
Computershare	Laik Tan	
Deutsche Securities	Kevin Novini	
Dion Global Solutions	Craig Gray	Product Manager – Australia and New Zealand
Dion Global Solutions	Nikki Gleisner	Account Manager
GBST	Andrew Murdoch	Product Specialist, GBST Capital Markets
GBST	Sue Schafer	Product Owner
Goldman Sachs	Darrel Schwarz	Technology Vice President
Goldman Sachs	Nichole Alexander	Operations Vice President
HSBC Securities Services	Gregory Wilkin	Head of HSBC Operations
HSBC Securities Services	Salih Kulic	Manager Custody

MEMBERS		
Company	Name	Job Title
JP Morgan	Ed Lawson	Settlements Manager
JP Morgan	Danny Ng	Middle and Back office AD Manager
JP Morgan	Scott Oakland	Direct Custody Product Manager Australia
JP Morgan	Daniel Smith	VP, Network Management
JP Morgan	Lesley Henderson	Technology Product team
Link Group	Ian Batterham	Business Applications Architect
Link Market Services	Sue Julian	National Manager, Corporate Actions
Macquarie Group	Paul Bragg	Senior Manager Equities Clearing ANZ
Macquarie Group	Merrilyn Auton	Manager Operations
Morgans Financial	Matt Neubauer	Team Leader, Service Management Team
Morgans Financial	Ed Strike	IT Manager
Morgan Stanley	Dorothy Wilson	Executive Director Morgan Stanley Wealth Management, ISG Technology
Morgan Stanley	Oscar Dela Cruz	
Morgan Stanley	Andrew Fielder	
Morgan Stanley	Gordon Davies	VP/Firmwide Ops
NAB Asset Management	Suresh Chinnappa	Head of Custody Service Operations
National Stock Exchange	Lina Lim	Head of Technology
Nomura Research Institute	John Ryan	Senior Consultant
Securitease	Anton Smith	Director
Securitease	Chris Werry	Business Analyst
Share Investing	Phil Barnes	Senior Manager, Platforms
SWIFT Standards	Nicole Jolliffe	Senior APAC Standards consultant
SWIFT	Chermaine Lee	SWIFT Project Coordinator
Sydney Stock Exchange	Leo Zhang	Business Analyst
Sydney Stock Exchange	Jason Shen	Market Operations Officer
UBS	Phillip Drury	Phillip Drury, Executive Director, Equities IT
UBS	Duncan Earl	Executive Director, Head of Change, UBS Group Operations
Wealthhub Securities	James Channon	Manager, Capital Markets Trading

ASX Management	
Name	Job Title
Tim Hogben	Chief Operating Officer (Chair of the Technical Committee)
Cliff Richards	Executive General Manager, Equity Post Trade Services
Karen Webb	Manager, Equity Post Trade Services
Rodd Kingham	Senior Manager, Equity Post Trade Services
Russell Eyre	Enterprise Architect
Anne-Marie Fisher-Taylor	Team Lead, Application Development
Darcy Wright	Senior Business Analyst, Equity Post Trade
Priscilla Ferri de Barros	Senior Business Analyst, Equity Post Trade
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy
Brendon Luscombe	General Manager, Product Owner, CHES Replacement Project



APOLOGIES

MEMBERS		
Company	Name	Job Title
Morgan Stanley	Kirsty Venters	VP, Prime Brkrng Funding & Fin Tech
SWIFT Standards	Mieko Morioka	Senior APAC Standards consultant

The meeting commenced at 3.00pm.

Agenda item 1: Agenda overview

The Chair welcomed Technical Committee members to the meeting including members attending by webinar.

The Chair outlined the Agenda for this meeting, referring to the presentation slides prepared by ASX. The agenda included an overview of the proposed forward plan of meeting topics, as outlined on slide number 3 of the ASX presentation.

Agenda item 2: Minutes from last meeting, open actions

The Chair noted that the minutes from the last meeting held on 6 June 2017 had been finalised, and that feedback on the draft minutes had been received from two members requesting a correction to a message reference and an additional note. The minutes have been published on the ASX CHES Replacement web page.

The Chair noted the outstanding actions from the last meeting as outlined on slide number 4 and 5 from the ASX presentation.

Action item 17 was for ASX to provide further information on party identification for issuers. The Chair noted that ASX would provide further information at the 22 August meeting. **This item remains open.**

Action item 19 remains open and on hold.

Action item 20 was for ASX to provide a proposed plan for the remaining training webinars. The Chair noted that ASX was still considering the plan. The Chair invited a member from SWIFT to provide an update on SWIFT training. SWIFT confirmed that the online learning portal for SWIFT users – SWIFTsmart had been updated with introductory information on ISO 20022, with more information coming later in the year. **This item remains open.**

Action item 23 was for members to provide responses to the ASX CHES demand reporting summary. The Chair noted an agenda item for today's meeting to discuss a proposed initial list of reports for descoping. **This item remains open.**

Action item 27 was for ASX to publish the list of comments received on MyStandards with ASX responses regularly, around the time of each meeting. The Chair noted that ASX had adopted this approach. **This item has been actioned and closed.**

Action item 28 was for ASX to re-publish the ISO 20022 equivalent of EIS 138 with correct default value INFO for Issuer of financial instrument code. **This item has been actioned and closed.**

Action item 29 was for ASX to review EIS 102 mapped equivalent message with Scott Oakland, JPM re optional inclusion of HIN. The Chair noted that this review would occur outside the meeting on a bilateral basis. **This item has been actioned and closed.**

Action item 30 was for ASX to provide further information on the use of UTC time format at this meeting covering potential circumstances. The Chair noted an agenda item for today's meeting on this topic. **This item remains open.**

Action item 31 was for ASX to publish sample consolidated (EIS 138) and rationalised (EIS 138 and 134) messages on MyStandards. Members to provide further comments via MyStandards, email. The Chair noted this had been done,

and the Manager Equity Post Trade Services confirmed the messages were available in a different collection, with details to be provided. **This item remains open.**

Action item 32 was for ASX to contact the users of the EIS 125 and EIS 121 to determine the reasons why the messages are being used. ASX to also provide volume metrics on the messages included in 101 cancellation/modify processing. Include in feedback to committee. The Chair noted an agenda item for today's meeting on this topic. **This item remains open.**

Action item 33 was for ASX to provide a presentation of CHES EIS mapping to ISO 20022, and typical ISO 20022 flows to assist committee discussion of key topics (e.g. rationalisation, consolidation, descope of certain processes like allegement modify). ASX would also seek input from key members about the best process going forward. The Chair asked the Manager Equity Post Trade Services to provide additional information on this topic, referring slide number 6. The Manager noted that ASX's approach while working through draft usage guidelines was to firstly, provide comparative CHES vs ISO 20022 flows, messages and key takes out in the presentation material for each meeting, secondly publish the usage guidelines on MyStandards, noting that annotations with field by field mapping to CHES were provided, and thirdly a Message Usage Guide (MUG) was available on the ISO website. The Manager noted that ASX was also considering the more formal documentation that would be provided by ASX to essentially replace the CHES EIS. **This item has been actioned and closed.**

Action item 34 was for ASX to add the overview of transaction ids to the July meeting agenda. **This item has been actioned and closed.**

Agenda item 3: CHES Replacement project update by ASX

The Chair invited the Executive General Manager, Equity Post Trade Services to provide an update on the CHES Replacement project. The Executive General Manager confirmed that ASX was still on track with a program of work culminating in the technology solution decision later this year (though noting it was an aggressive timeline) and outline of Day 1 scope early next year. The current focus of stakeholder engagement was on the working group workshops, particularly on corporate actions, with 4 x 2 hour workshops on this topic so far. The Executive General Manager outlined the event lifecycle approach to the discussion, with draft business requirements formed by the group based on the discussion of problem statements. More detailed discussion on cum entitlement balances and deferred settlement trading had also occurred. The key themes from the business requirements was a desire for electronic processing and the removal of paper. A member noted the use of the term "entitled holder" on the requirements and asked if ASX would provide a definition? The Executive General Manager noted that would be provided.

The Executive General Manager referred to slide number 8 providing an overview of the investigation of Distribution Ledger Technology and ASX's approach to the assessment of the technology. It was noted that ASX was also focused on key non-functional requirements that had also been called out in the CSIRO's Data61 paper on DLT. A member noted the Executive General Manager's comments at a recent SWIFT business forum about the options for a customer to connect to the platform – either via ISO 20022 messaging or a node. The Executive General Manager outlined the different approaches, and that via either approach it was likely the underlying messaging would be based on ISO 20022.

Agenda item 4: ISO 20022 project update by ASX

The Chair invited the Manager, Equity Post Trade Services to provide an update on the ASX ISO 20022 stream of work. The Manager referred to slide number 9 of the ASX presentation and noted that ASX and SWIFT work was progressing well with some business areas (shown green on the slide) had been mapped already. The Manager also noted the increased rate of work for ASX and SWIFT, and that this would in turn have an impact on the Technical Committee members with regard to their own review.

ASX expected that all usage guidelines when in a good draft state would be published on MyStandards, and that ASX would bring to the committee meetings any particular items of interest. The Manager noted that the usage guidelines were draft, and there would be continuing change as needed based on the business requirements input. For now they shouldn't be considered as final specifications.

A member requested that ASX highlight to the members those usage guidelines that needed review. The members discussed the possibility of a flag in MyStandards to indicate particular review items. **(Matters Arising 1, Action item 35)**

Agenda item 5: Update from Business Committee

The Chair noted that the last Business Committee was held on Thursday 22 June 2017. In addition to an update on the CHES Replacement project and in particular the working group engagement, the committee also discussed the recent ASX investor survey and the consultation on ASX's Clearing and Settlement set of end of day close prices. There were no recommendations from the committee to the ASX Clearing and Settlement Boards. The next meeting is scheduled for Thursday 3 August, with a small agenda. The agenda includes a discussion on Corporate Actions STP Phase 2, as well as the regular update on the CHES Replacement project.

Agenda item 6: Matters for Consideration

a) Initial report candidates for descope (Action item 23)

The Chair invited the Team Lead, Application Development to provide an update on Action item 23. ASX had reviewed the report list and recommended a first tranche of report candidates for descope (refer slide number 11), including PFD (output EIS message 230), PFH (EIS 232), USD (EIS 226), USH (EIS 228), OSL (EIS 274, 286). ASX had received no contrary feedback from members on the proposed descope of these reports in responses to its paper on demand reports, and there had been nil usage of these reports in the period since May 2016. No comments were received from members and the committee endorsed the recommendation. The ASX Architect CSD Development noted that ASX would continue to review the remaining reports and usage and bring further descope recommendations to the committee.

b) Published usage guideline feedback

The Senior Business Analyst, Equity Post Trade Services noted that SWIFT had confirmed regular maintenance windows for the MyStandards portal, and these were now published on the site (refer slide number 12). Since the last meeting ASX had published 5 additional usage guidelines for review and comment by members. Comments had been made by 3 firms (vendors). The Senior Business Analyst requested that even if organisations were reviewing and had no comments it would be helpful to at least leave a general comment to indicate a review had been done.

A member asked if they could comment on a previously made comment. ASX confirmed that was the case, but there was probably no need to make an affirmative comment if you agreed with another. A representative from SWIFT noted there was a feature in MyStandards to affirm a comment, if that was desirable. ASX confirmed it will provide information on this. **(Matters Arising 2, Action item 36)**

Referring to slide number 13 in the ASX presentation, the Senior Business Analyst provided feedback on some key points around the mapping, noting that any comments around business change were passed on to the business requirement team.

In response to queries on the target ISO 20022 message selected, ASX proposed to leave the EIS 164 equivalent, setr.044 as is. For settlement output messages EIS 146, 156, the same ISO 20022 base message was used and was the best fit. While to current mapping from EIS to usage guidelines was 1:1, there could be future simplification. Their Chair asked if this was an example where we were aware at the end of the high level gap analysis that the number of unique ISO 20022 messages would be less than the number of current EIS messages.

A member asked if the same base message was being used for 2 different scenarios how users would route the message. The Senior Business Analyst confirmed it was likely the Business Service description in the BAH would help identify routing. ASX was yet to do detailed work on the Business Service modelling and descriptions.

With regard to redundancy where information was carried forward in messages, a member asked if this could be optional or turned off for outbound messages from CHES. The ASX Architect noted that in CHES today there were some messages that could be "turned off".

The Senior Business Analyst also noted the comments received with regard to the mapping to the minimum mandatory elements and queries whether we would consider using additional useful elements in the ISO 20022 messages. A member noted that from a custodian perspective it was more desirable to have more information about transactions. Another custodian member agreed, noting they could get multiple transactions and any information to assist with differentiation and reconciliation would be helpful.

c) Date and Time considerations (Action item 30)

Noting the action to provide more information at this meeting on date and time considerations the ASX Senior Business Analyst proposed a simplification going forward rather than supporting multiple formats, with the recommendation to adopt a single date and time format throughout the messages. The recommendation was to use only UTC-format. The ASX Senior Business Analyst noted that other implementations in ISO 20022 such as T2S and the NPP used this format. Should ASX accommodate existing conventions, this means the addition of data in some messages.

A member asked if this applied to both inbound and outbound messages. ASX confirmed that was the case. If the message was outbound, CHES would include the Processing Date and Time. ASX expects a small number of inbound fields to be affected.

A member asked if this was with regard to the format or the actual time within that field. The ASX Senior Business Analyst confirmed it was both – set at Greenwich Time. The member noted their understanding at the last meeting's discussion that it was only the format, and they would be particularly concerned about the corporate action impact.

The ASX Senior Business Analyst asked members to consider the impact, where currently CHES, messages need to support three different formats. A member asked if this standard was in use in other countries, and if it was were there any feedback or concerns. The Chair confirmed that ASX will seek more information and respond to the committee. A member offered to check with their European office for feedback.

The Chair asked if members needed more time to consider this recommendation. The members agreed with **Action item 30** to be updated.

d) Cancel/Correct or Maintain of settlement instructions (Action item 32)

Noting the action to continue discussion on this topic at this meeting the ASX Senior Business Analyst proposed a revised recommendation (refer presentation slide numbers 17 and 18). It was noted that there was limited ISO 20022 support for unilateral and bilateral change requests. Therefore the recommendation was revised to only do cancel/correct for bilateral modifications (and not allow modify – removal of EIS 121); and allow the continued use of

unilateral modification (retain EIS 125). In the past financial year only 5 participants had used the EIS 121, and didn't match more than twice.

A member noted that their organisation did use the EIS 121 and would like to review the usage before committing to the descope. ASX noted it would check if any EIS 128's were generated as a result, and also noted that these were house kept. The Chair noted **Action item 32** would remain open until all members confirmed their agreement with the recommendation.

e) Free of Delivery (FOD) / Miscellaneous Payments

The ASX Senior Business Analyst noted a new agenda topic was being raised as SWIFT and ASX were unable to map the Free of Delivery usage of the EIS 101 to the ISO 20022 base message selected for the DvP usage of the EIS 101. To accommodate Free of Delivery, then the base message would be pacs. (refer presentation slide # 20) ASX's recommendation would be to not include an equivalent miscellaneous payments facility in CHES Replacement.

The Chair asked if there was a need for cash only payments, could we use a different ISO 20022 message?

A representative from SWIFT noted the recommendation would be to use a separate payment message.

The Chair noted that ASX would take this to the working group re settlement for consideration and assessment of the business need.

A member also noted that depending on the outcome of business requirements from the working group on corporate actions, there could be a business need for such a payment for inclusion in batch settlement.

f) Overview of transaction ids (Action item 34)

Noting the action to continue discussion on this topic at this meeting the ASX Senior Business Analyst provided members with more information on the potential modelling of transaction ids. With reference to presentation slide number 22, transaction ids shown in green are unique, then following allegation the same id is then red (a duplicate value), then orange ids are also duplicates. Messages from CHES include a range of transaction ids that add complexity and don't currently include a unique transaction id.

The ASX Enterprise Architect explained that ASX was mapping all existing CHES transaction ID's to an appropriate ISO20022 field. In addition, where outbound messages do not yet have a unique Transaction id then one is being added. With this approach, ASX was keeping the options open for transition (i.e. whether to provide backward compatibility), as the migration approach cannot be finalised until go-live scope has been determined. The unique Transaction Id in each message can be used to detect duplicate messages (possible in certain failure recovery scenarios). With reference to presentation slide # 23 the example shows transaction ids as blue as mapped to EIS, new and unique transactions ids shown as purple and orange transaction ids represent "related" values.

Referencing presentation slide #24 the ASX Senior Business Analyst summarised how different EIS fields were currently mapped to ISO fields. The key point was that there was not consistency across ISO messages, i.e. the EIS value didn't map to the same field across ISO messages. The ASX Senior Business Analyst reiterated that not all usage guidelines were final, and because of the inconsistency it was important for customers not to apply a generic mapping across the message set.

A member asked if this was the same model that T2S used and was it possible to provide a comparison. The meeting agreed that ASX and SWIFT come back with comparisons to other market implementations (**Matters Arising 3, Action item 37**).

The ASX Senior Business Analyst also noted that the transaction id may become longer if we use BIC instead of UIC in the transaction id.

The following presentation slides number 25 to 27 provided examples of message flows and the dotted lines represented linkages. The ASX Senior Business Analyst acknowledged that it is complex, and represents as-is mapping for now. ASX expects to apply a second wave of review to further simplify. A member asked why we couldn't do this simplification now. The ASX Senior Business Analyst noted this was the best fit for now. The Chair confirmed that we are adopting ISO 20022 and finding best fit for existing message suite. The member asked that if no correct fit then can we look at other options.

The Chair noted that the requirements stream is reviewing functionality changes and ASX would be happy to discuss further. If there was no natural fit for field mapping then these are candidates for changes.

Another member noted that ideally we should make sure we align globally. The ASX Senior Business Analyst noted that we are reliant upon SWIFT's advice as standards experts and also their lead role in T2S.

The Chair noted that the outcome may not necessarily be worse but unique to Australia, with benefits attached for good reason (i.e. not to go back to pure CSD model). A member agreed that not all implementations were the same, but also need an element of review.

The ASX Senior Business Analyst noted that T2S added about 40 odd messages to the standard message set for their own implementation. The ASX mapping was a good fit for now and that ASX and SWIFT would continue to explore opportunities for consolidation and simplification. A member asked that if there was no natural fit these items be taken to the working groups. The Chair confirmed that would be done.

g) Settlement usage guidelines

The ASX Senior Business Analyst noted that the next set of usage guidelines for member review (refer presentation slide number 29). EIS 015, 174, 405, 407, 408, 426, 016, 076, 107, and 106 would be published and available for member comments after the meeting.

A member asked if the message flows provided in future could also include a transaction id overlay. ASX confirmed this would be done where possible.

Agenda item 7: Next meeting

The Chair summarised the key action items from the meeting and noted that draft minutes from the meeting would be circulated to members for review.

The Chair confirmed that the next meeting would be held on Tuesday 22 August in Sydney, and otherwise by webinar. Details would be provided to members.

The Chair noted the planned agenda for this meeting as outlined on slide number 30 of the ASX presentation.

The Chair thanked members for their input, and for participating in the meeting. The meeting closed at 5.00pm.



Signed as a correct record of the meeting.

A handwritten signature in black ink, appearing to be 'A. Sk.', written above a horizontal line.

Technical Committee Chair

21 August 2017

Date

ACTION ITEMS

No.	Meeting Date	Open Action Items	Owner	Due Date
17	14 March 2017	Provide further information on party identification for issuers – UIC or BIC and proposed process.	ASX	22 August 2017
19	2 May 2017	Provide sample of demonstration of comparison between ISO 20022 and ISO 15022 messages.	Scott Oakland, JPM	On hold
20	2 May 2017	Provide details of a proposed plan including potential topics for the remaining training webinars for feedback, standard training provided by SWIFT, and including identification of business vs. technical topics.	ASX	22 August 2017
23	2 May 2017	Further review of the ASX CHES demand reporting summary and responses to questions contained in that summary. ASX to continue review of reports and provide further candidates for descope at meetings.	Members / ASX	22 August 2017
30	6 June 2017	Obtain international usage comparisons on the use of UTC time format. Members to provide input from international offices where possible.	ASX, members	22 August 2017
31	6 June 2017	Sample consolidated (EIS 138) and rationalised (EIS 138 and 134) messages published in the MyStandards community – in a separate collection “Sample Message Review”. Members to review and provide further comments via MyStandards, email.	Members	22 August 2017
32	6 June 2017	For Cancel/Correct & Modify, ASX recommendation revised to only do cancel/correct for bilateral modifications (and not allow modify – removal of EIS 121). ASX to contact users of EIS 121, and action remains open until all members confirmed their agreement with the recommendation.	ASX, Members	22 August 2017
35	18 July 2017	ASX to publish all final draft usage guidelines in MyStandards and highlight to members those usage guidelines that need their review. SWIFT to advise if a flag is available in MyStandards to indicate particular review items.	ASX, SWIFT	22 August 2017
36	18 July 2017	Provide members with details of feature in MyStandards to affirm a comment.	ASX, SWIFT	22 August 2017
37	18 July 2017	Provide comparisons to other market implementations of transaction ids.	ASX, SWIFT	22 August 2017

No.	Meeting Date	Closed Action Items	Owner	Closed Date
1	13 December 2016	Amend the Charter to reflect that the Chair "will" (instead of "may") forward copies of the minutes to the Business Committee for endorsement. ASX to publish and distribute final Charter.	ASX	13 December 2016
2	13 December 2016	Provide members with information on how to access SWIFT MyStandards.	ASX	14 March 2017
3	13 December 2016	Provide members with an overview of ISO 20022 training options.	ASX/SWIFT	7 February 2017
4	7 February 2017	Provide members with list of current scope of messages for detailed mapping during first half 2017.	ASX	14 March 2017
5	7 February 2017	Schedule training webinar for the attendance by members and seek and review feedback after the initial webinar.	ASX / SWIFT	14 March 2017
6	7 February 2017	Add link to relevant ISO 20022 information websites to the CHES Replacement web page.	ASX	14 March 2017
7	7 February 2017	Provide more details on access to online education available at swift.com.	SWIFT	14 March 2017
8	7 February 2017	Provide members with the current list of Market Identification Codes (MICs)	ASX	14 March 2017
9	7 February 2017	Provide members with more information on the use of BIC vs. UIC as the party identification code.	ASX / SWIFT	14 March 2017
10	7 February 2017	Market Operators to advise the preferred MIC to be presented in trade related messages as the "Place of Trade".	ASX, Chi-X, NSX, SSX	6 June 2017
11	7 February 2017	ASX to conduct analysis on whether the identification of a financial instrument is a fixed value or true value of the proprietary code issuer.	ASX	14 March 2017
12	7 February 2017	Provide list of proposed code (i.e. condition or BOM) in ISO 20022 format (4 character) mapped against CHES codes.	ASX	14 March 2017
13	7 February 2017	Add a general CHES Replacement update to the standing agenda for meetings.	ASX	14 March 2017
14	7 February 2017	Check the next Technical Committee meeting date planned for March and advise members of any change.	ASX	14 March 2017
15	14 March 2017	Schedule future agenda item to discuss transition arrangements, including any changed values (e.g. party identifiers).	ASX	2 May 2017

No.	Meeting Date	Closed Action Items	Owner	Closed Date
16	14 March 2017	Create register of matters that may impact upstream, downstream systems or processes, including codes, identifiers and ISO 15022.	ASX	2 May 2017
18	14 March 2017	ASX to draft procedures for change requests to usage guidelines and code lists.	ASX	2 May 2017
21	2 May 2017	Provide a list of standard training topics to share. Noted this action item is combined with action item 20.	SWIFT	6 June 2017
22	2 May 2017	Provide members with a copy of the presentation material from the trial training webinar held on 27 April 2017.	ASX	6 June 2017
24	2 May 2017	Resolve issue with Comments function on MyStandards and advise members when fixed.	ASX/SWIFT	6 June 2017
25	2 May 2017	Provide samples of the proposed consolidation and rationalisation scenarios for EIS 138 and EIS 134.	ASX	6 June 2017
26	2 May 2017	Provide proposal to broaden the engagement and method to seek feedback on key concepts such as consolidation/rationalisation.	ASX	6 June 2017
27	6 June 2017	Publish list of comments received on MyStandards with ASX responses regularly, around the time of each meeting.	ASX	18 July 2017
28	6 June 2017	Re-publish ISO 20022 equivalent of EIS 138 with corrected default value INFO for issuer of financial instrument code.	ASX	18 July 2017
29	6 June 2017	Review EIS 102 mapped equivalent message with Scott Oakland, JPM – optional inclusion of HIN.	ASX	18 July 2017
33	6 June 2017	Provide a presentation of CHES EIS mapping to ISO 20022, and typical ISO 20022 flows to assist committee discussion of key topics (e.g. rationalisation, consolidation, descope of certain processes like alleviation modify). ASX would also seek input from key members about the best process going forward.	ASX	18 July 2017
34	6 June 2017	Add the overview of transaction ids to the July meeting agenda.	ASX	18 July 2017



ISO 20022 TECHNICAL COMMITTEE REPORT TO THE BUSINESS COMMITTEE

ISO 20022 TECHNICAL COMMITTEE MEETING 22 AUGUST 2017

The Technical Committee met on 22 August in Sydney.

MEETING AGENDA (NON STANDARD ITEMS)

Business and Technical Matters for Consideration:

- MyStandards Community – usage guideline feedback;
- Registration details;
- CHESS EIS 421 – securities transformation;
- Achieving ISO 20022 compliance;
- Further ISO 20022 usage guidelines available for member review; and
- A discussion regarding noted action items and next steps for the Committee.

KEY ISSUES DISCUSSED

- The Chair noted that of ten open action items, five had been actioned and were noted as closed, or for discussion at the meeting and subsequently closed. Five action items remained open.
- The committee continued discussion on the standardisation of date, and date and time formats and the conventions used in other market implementations. The committee agreed that ASX proceed with adopting the use of UTC (coordinated universal time), noting that further analysis would be required on upstream considerations and impacts such as trade reporting.
- At prior meetings of the Technical Committee share registry participants had requested that ASX promote relevant topics of interest for share registries as early as possible in the meeting schedule. Two such topics raised at this meeting included the standardisation of holder registration details, and securities transformation messages. ASX noted that the ISO 20022 standard would force further standardisation of registration details, with additional mandatory fields. The opportunities to use standardised data to reduce paper in associated processes were also discussed. For securities transformation messages, ASX informed the committee it would need to balance ISO best practice adoption vs. more pragmatic as-is functionality in agreeing certain adoption principles. This was a recurring theme across other message and process types. A number of action items were raised for the continued engagement by ASX with share registries on these particular and related topics.



- The Chair took the opportunity in the meeting to reflect on the process taken to date by ASX for the sharing of ISO 20022 adoption material and draft usage guidelines with the committee members, and the members own reviews and feedback to ASX. The Chair sought comment from members on the approach taken to date and any suggestions for change. The Chair noted an action to personally approach members bilaterally for feedback. Related to this checkpoint, ASX also noted that the SWIFT and ASX teams had come together for a 7 day workshop in early August to review project progress, which was noted as on track, and plan the work ahead. This was a valuable exercise to also review potential agenda items and topics of interest to raise with the Technical Committee. Further, ASX provided an overview of SWIFT and ASX's approach to ensure best practice adoption of ISO 20022, and the change profile of CHES EIS to ISO 20022 mapping to date. In general CHES EIS messages were well structured and suited to ISO 20022 mapping with 67% of the 130 initial mapped messages mapping well, and a further 19% messages only having 1 change element. The change profile will continue to be tracked by ASX in order to seek Technical Committee input on alternate mapping opportunities, and to quantify the level of work involved in seeking changes requests or registering new messages.

AGREED ACTIONS

Five new action items were noted from the meeting, with a total of ten open action items. The action items are detailed in full in the Minutes from the meeting.

Minutes from the meeting are attached.

TECHNICAL COMMITTEE MEETING 10 OCTOBER 2017 - SYDNEY

MEETING AGENDA (NON-STANDARD ITEMS)

Business and Technical Matters For Consideration:

- Review of member feedback on the draft usage guidelines published on SWIFT MyStandards;
- Settlement chain, party identification
- Simplify status messages
- Reporting methods
- Inclusion of sub seconds in timestamps
- Introduction of new data requirement annotation
- Overview of next tranche of draft ISO 20022 equivalents for CHES EIS messages.

A report and minutes from the meeting will be provided at the next Business Committee meeting.



MINUTES OF THE ISO 20022 TECHNICAL COMMITTEE

Tuesday 22 August 2017

ASX Offices, Bridge Street, Sydney; Webinar

- 1. Welcome, Agenda**
- 2. Minutes from last meeting, open actions**
- 3. CHES Replacement project update by ASX**
- 4. ISO 20022 project update by ASX**
- 5. Update from Business Committee**
- 6. Matters for Consideration (Business and Technical matters)**
 - 6a MyStandards Community - usage guideline feedback**
 - 6b Registration details**
 - 6c CHES EIS 421 – securities transformation**
 - 6d Achieving ISO 20022 compliance**
 - 6e Usage guidelines for review**
- 7. Next meeting**



ATTENDEES

MEMBERS		
Company	Name	Job Title
Australian Payments Network Limited	Paul Creswick	Security Standards Manager
Bank of America Merrill Lynch	Andree Hindmarsh	Head of GMOT Australia
Bank of America Merrill Lynch	Jimmie Alam	
Bell Potter Securities	Dean Surkitt	Managing Director Retail
BNP Paribas Securities	Narelle Rutter	Head of Local Custody & Clearing Operations
BNP Paribas Securities	Wayne Murphy	Project Manager
Boardroom Limited	Tony Robinson	Senior Software Engineer
Boardroom Limited	Michael Mullins	CIO
Broadridge (Australia)	John Greenhow	General Manager, Australia
Broadridge (Australia)	Manoj Mathew	Business Analyst
Broadridge (Australia)	Mabel Chow	Development and Support Manager
CBA Equities	Joel Cox	Technical Business Analyst
CBA Equities	Carolyn Webb	Test Manager
CBA Equities	Ben Lowe	Manager Settlements
Chi-X Australia	Mike Aikins	Head of Solution Development
Chi-X Australia	Suketu Adhvaryu	Senior Solution Architect
Citicorp	Miles O'Connor	Director, Direct Custody & Clearing Securities Markets & Securities Services
Citicorp	Brett Dennis	Head of Operations – Party Clearing
Citicorp	Vlad Medvedev	
Citicorp	Lyll Herron	
Citicorp	Janice O'Brien	Markets & Securities Services Technology
Citicorp	Matthew Warner	
Citicorp	Ashok Kumar Balusa	
Citicorp	Glenn Pahilan	
Computershare	Leanne Bailey	Senior Business Analyst Product & Innovation
Computershare	Laik Tan	
Deutsche Securities	Kevin Novini	
Dion Global Solutions	Craig Gray	Product Manager – Australia and New Zealand
Dion Global Solutions	Nikki Gleisner	Account Manager
GBST	Andrew Murdoch	Product Specialist, GBST Capital Markets
GBST	Sue Schafer	Product Owner
Goldman Sachs	Darrel Schwarz	Technology Vice President
Goldman Sachs	Nichole Alexander	Operations Vice President
HSBC Securities Services	Gregory Wilkin	Head of HSBC Operations
HSBC Securities Services	Salih Kulic	Manager Custody
HSBC Bank Australia Limited	Michael Macintosh	Senior Client Account Manager, Global Liquidity and Cash Management



MEMBERS		
Company	Name	Job Title
HSBC Bank Australia Limited	Anna Fratini	Senior Product Manager – High Value Payments, Clearing and Financial Institutions,
JP Morgan	Ed Lawson	Settlements Manager
JP Morgan	Danny Ng	Middle and Back office AD Manager
JP Morgan	Scott Oakland	Direct Custody Product Manager Australia
JP Morgan	Daniel Smith	VP, Network Management
JP Morgan	Lesley Henderson	Technology Product team
Link Group	Ian Batterham	Business Applications Architect
Link Market Services	Sue Julian	National Manager, Corporate Actions
Macquarie Group	Paul Bragg	Senior Manager Equities Clearing ANZ
Macquarie Group	Merrilyn Auton	Manager Operations
Morgans Financial	Matt Neubauer	Team Leader, Service Management Team
Morgans Financial	Ed Strike	IT Manager
Morgan Stanley	Kirsty Venters	VP, Prime Brkrng Funding & Fin Tech
Morgan Stanley	Oscar Dela Cruz	
Morgan Stanley	Andrew Fielder	
Morgan Stanley	Gordon Davies	VP/Firmwide Ops
NAB Asset Management	Suresh Chinnappa	Head of Custody Service Operations
National Stock Exchange	Lina Lim	Head of Technology
Nomura Research Institute	John Ryan	Senior Consultant
Securitease	Anton Smith	Director
Securitease	Chris Werry	Business Analyst
Share Investing	Phil Barnes	Senior Manager, Platforms
SWIFT Standards	Nicole Jolliffe	Senior APAC Standards consultant
SWIFT Standards	Mieko Morioka	Senior APAC Standards consultant
SWIFT	Chermaine Lee	SWIFT Project Coordinator
Sydney Stock Exchange	Leo Zhang	Business Analyst
Sydney Stock Exchange	Jason Shen	Market Operations Officer
UBS	Phillip Drury	Phillip Drury, Executive Director, Equities IT
UBS	Duncan Earl	Executive Director, Head of Change, UBS Group Operations
Wealthhub Securities	James Channon	Manager, Capital Markets Trading

ASX Management	
Name	Job Title
Tim Hogben	Chief Operating Officer (Chair of the Technical Committee)
Cliff Richards	Executive General Manager, Equity Post Trade Services
Karen Webb	Manager, Equity Post Trade Services
Rodd Kingham	Senior Manager, Equity Post Trade Services
Russell Eyre	Enterprise Architect
Anne-Marie Fisher-Taylor	Team Lead, Application Development



ASX Management	
Name	Job Title
Darcy Wright	Senior Business Analyst, Equity Post Trade
Priscilla Ferri de Barros	Senior Business Analyst, Equity Post Trade
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy
Brendon Luscombe	General Manager, Product Owner, CHESS Replacement Project

APOLOGIES

MEMBERS		
Company	Name	Job Title
Australian Payments Network Limited	Andy White	Chief Operating Officer
Computershare	Paul Walton	Senior Manager, Corporate Actions & New Business Development – Investor Services
Morgan Stanley	Dorothy Wilson	Executive Director Morgan Stanley Wealth Management, ISG Technology



The meeting commenced at 3.00pm.

Agenda item 1: Agenda overview

The Chair welcomed Technical Committee members to the meeting including members attending by webinar.

The Chair outlined the Agenda for this meeting, referring to the presentation slides prepared by ASX. The agenda included an overview of the proposed forward plan of meeting topics, as outlined on slide number 3 of the ASX presentation.

Agenda item 2: Minutes from last meeting, open actions

The Chair noted that there had been no feedback on the minutes from the meeting held on 18 July 2017 and subsequently had been finalised. The minutes have been published on the ASX CHES Replacement web page.

The Chair noted the outstanding actions from the last meeting as outlined on slide number 4 and 5 from the ASX presentation.

Action item 17 was for ASX to provide further information on party identification for issuers. The Chair noted that ASX would take this off-line with registries for further discussion and would provide the outcome to the Technical Committee. **This item remains open.**

Action item 19 remains open and on hold.

Action item 20 was for ASX to provide a proposed plan for the remaining training webinars. The Chair noted that ASX was considering training closer to implementation. The Chair asked members to provide any feedback, or any specific topics for inclusion. **This item remains open.**

Action item 23 was for ASX to provide further report candidates for descoping. The Chair noted that ASX had not identified any further reports at this stage, but would come back to the next meeting with a list of the next candidates. **This item remains open.**

Action item 30 was for ASX to obtain international usage comparisons on the use of UTC time format. Members were also to provide input from international offices where possible.

The ASX Senior Business Analyst referred to slide number 8 of the ASX presentation providing an overview of comparative global implementation of date and time formats. In summary there were various methods used globally for date, and date and time. There had also been mixed feedback from members of the committee.

Referring to slide number 9 of the ASX presentation the Analyst outlined 3 key areas where there may be impact.

1. Logical date fields (based on BP12) – remains logical date but formatting change to ISO format (from yyyyymmdd to yyyy-mm-dd)



2. Timestamp fields (based on BP21) - the ASX recommended that where there was a time stamp to use UTC, with zulu format (except for Trade Execution time reported by AMO)
3. Trade Execution Time (in EIS164) – Trade Date and Trade Execution Time consolidated to single ISO field in YYYY-MM-DDThh:mm:ss using local time (TBC –see below)

The ASX Senior Business Analyst did note an error on slide number 9 where “//YYMMDD” reference should be “//YYYYMMDD”.

The EIS 164 message was a special case, where there was an upstream dependency, so trade date could stay in local time. A member questioned this exceptional case, with the Analyst explaining this information was received from an upstream AMO rather than CHES derived data. The member asked why CHES couldn't convert the date, and that the participants would then have to do the conversion if CHES did not. The Analyst suggested using local time would help reconcile between AMO and CHES records. Another member asked if an AMO could provide in UTC format and was it worth asking AMOs if this was feasible, or for CHES to make the change before dissemination. A member asked if there was any impact on corporate action event timetable. The Analyst confirmed that wasn't the case as corporate action events included a business date rather than a processing date and time. The Chair confirmed that ASX was trying to come to an agreement on this point. A member suggested that they would be seeking consistency across messages for one format to be used, and while noting conversions were possible, consistency was preferred. That member confirmed their preference for UTC. Another member suggested this agreement had already been reached at the last meeting. The Chair sought any further objections from the committee and none were forthcoming, therefore the Chair confirmed that ASX would move ahead with use of UTC (**Action item 30 closed**), noting the further analysis required on the EIS 164 and upstream considerations. (**Matters Arising 1, Action item 38**)

Action item 31 was for members to provide further comments via MyStandards, regarding the sample consolidated (EIS 138) and rationalised (EIS 138 and 134). The Chair noted that no comments had been received to date via MyStandards. The Chair asked a general question of the committee whether ASX approach to seeking feedback/member review was effective or what else could be done. The Chair sought commitment from the group that they at least acknowledge they had reviewed, even if no specific comments. The ASX Senior Business Analyst confirmed the simplification samples were available in a different collection (called ASX_AU_EPT_Sample_Message_Review). **This item was closed.**

Action item 32 was for ASX to contact the users of the EIS 121 to confirm agreement with the recommendation to remove usage of the EIS 121. The Chair noted that HSBC had confirmed to ASX their agreement to remove EIS 121 and the recommended approach. The Chair thanked HSBC for their consideration and confirmed the recommendation would be adopted. **This item was closed.**

Action item 35 was for ASX and SWIFT to publish all final draft usage guidelines in MyStandards and highlight to members those usage guidelines that need committee member review. The Manager Equity Post Trade Services confirmed with reference to slide number 6 of the ASX presentation that to date the usage guidelines shared were all for committee review. Once ASX began to publish additional guidelines that did not necessarily need review there were a few options available to highlight that to the members – including documenting the review requirements in the description section of the collection in MyStandards, for members to refer to the date on the version label for each usage guideline, and that ASX would provide confirmation by email. **This item has been actioned and closed.**



Action item 36 was for ASX and SWIFT to provide members with details of feature in MyStandards to affirm a comment. The Manager Equity Post Trade Services confirmed with reference to slide number 7 of the ASX presentation that a member that agreed with a comment previously made by another member could leave a simple comment referencing the agreement, as demonstrated. **This item has been actioned and closed.**

The Chair again asked for feedback on the process being taken by ASX and whether a different approach should be considered. The Chair would consider how to elicit feedback from members – whether that was by survey or bilateral discussions. **(Matters Arising 2, Action item 39)**

Action item 37 was for ASX and SWIFT to provide comparisons to other market implementations of transaction ids. The ASX Senior Business Analyst briefly described the difference between event id and message id and that this would be a topic for discussion at the October meeting. **This item remains open.**

The Chair noted that a member had emailed ASX with a suggestion that a sub-group of the committee discuss the use of bespoke/unregistered messages, and use of supplementary data. The member questioned the usage or relevance of such ISO-based messages for CHES Replacement. The Chair noted this request had not been formalised and would be considered in the context of the role of the Technical Committee. The member noted that until ASX confirmed the published usage guidelines were final and not draft, it may be premature to review the guidelines. The Chair acknowledged that the analysis currently being undertaken was subject to change through the business requirement gathering process but was not irrelevant and would form an important foundation in finalising the messaging protocol.

Agenda item 3: CHES Replacement project update by ASX

The Chair invited the Executive General Manager, Equity Post Trade Services to provide an update on the CHES Replacement project. The Executive General Manager noted that the business requirement gathering working groups were progressing well, having completed 5 workshops related to corporate actions, with good discussion on improvements, problems and opportunities. 8 high level business requirements had been formed to date by the corporate actions group. The requirements were published and available on the ASX website as part of the Business Committee papers.

There had also been one meeting related to transfers and conversions with 3 draft business requirements. The next working group would commence in early September focused on settlement enhancements, with invitations and pre reading to be distributed soon. All draft requirements were published on the ASX CHES Replacement website.

The Executive General Manager referred to the 3 key aspects of the project including the technology investigation, business requirements and ISO 20022 work. The technology build (DLT) was tracking to plan based on a subset of current and enhanced CHES functionality. The delivery of software to date had been high quality with quick remedy of defects. The DLT build was also focused on non-functional aspects over the next 3 to 4 months. ASX also confirmed it would be seeking a third party security review, with outcomes to be shared with the Business Committee initially. The day 1 scope for implementation would be announced end of March 2018 with feedback on the priorities agreed by the working groups, shared with Business Committee and with additional public consultation expected on this scope. The information shared end of March would also include a plan to complete the build, integration and so on, but couldn't say how long that would be. ASX appreciates feedback from stakeholders regarding the impact on their own budgets and resources.



A member asked if the security review would be shared with stakeholders. The Executive General Manager confirmed that high level points would be shared, recognising that the review would contain sensitive information regarding security. The Chair noted that ASX had released its annual results last week, with well-received financials, but the focus of press interest continues to be on this project and the outcome of the DLT work.

Agenda item 4: ISO 20022 project update by ASX

The Chair invited the Manager, Equity Post Trade Services to provide an update on the ASX ISO 20022 stream of work. The Manager referred to slide number 11 of the ASX presentation, noting that there hadn't been a lot of mapping work in the last month as the ASX and SWIFT teams had come together for 7 days of onsite workshops in late July, early August to review progress and plan the work ahead. The workshop discussions were focused on various points noted on the slide, which were the subject of further agenda items at this meeting, and also any key items to bring to the Technical Committee as noted in the forward work plan. The Manager also noted that ASX would provide to members at the next meeting the list of messages in scope for mapping during this second half of the year. **(Matters Arising 3, Action item 40)**

Agenda item 5: Update from Business Committee

The Chair noted that in addition to the working group overview provided to the recent Business Committee by the Executive General Manager Equity Post Trade Services, that ASX had also provided an update on the Corporate Actions STP project and progress to completing Phase 2 covering the remaining corporate action events, with the aim to achieving associated benefits. ASX had not committed to a timeframe but indicated a potential 18 to 24 month duration depending on planning and resourcing. The Business Committee was also provided with an update on the activities of the Technical Committee. A member asked if the Corporate Actions STP project would be separate to CHES Replacement and what were the relative delivery timelines. The Chair noted that STP was expected to be delivered prior to CHES Replacement.

The Chair noted that a recommendation had been raised by the Business Committee to include AMO representatives in the CHES Replacement working group meetings going forward and that this had been approved by the ASX Clearing and Settlement Boards.

Agenda item 6: Matters for Consideration

a) Published usage guideline feedback

The ASX Senior Business Analyst noted that comments had been received from 4 members of the committee representing vendor, registry and participant members. No comments had been received on the sample message collection.

Referring to slide number 15 of the ASX presentation, the Analyst provided feedback on 3 common themes, noting a more detailed agenda item for this meeting on the theme of Registration Details. The Analyst provided clarity on the identification of parties in messages and the difference between receiving and delivering in respect to units, vs. the party sending and receiving the request.



With regard to securities movement type, reasonable feedback had been provided regarding the usage of RECE instead of DELI in EIS 015, noting this was not consistent with the prescribed EIS 101 equivalent usage. The field was mandatory in ISO 20022, but not part of the local data requirements so ASX was ambivalent whether it be RECE or DELI provided the usage was agreed and ideally consistent.

The Analyst provided an explanation of the Business Service values, noting this was a string of text in the BAH available to identify a service or different scenarios. ASX was yet to define its usage, but noted it would not be a list of codes but values in the string. Usage would be clear to the sender and receiver what the purpose of the message was.

b) Registration details

The ASX Senior Business Analyst provided an outline of how a holder's registration details could be captured in equivalent ISO 20022 messages, noting that ASX had proposed separating Name and Address Line elements, including a mandatory country element. Referring to slide number 16 of the ASX presentation it was noted that the ISO standard provided even more standardisation into separate street name, town name etc. fields if that was desirable. The size of these fields could also be increased to a maximum of 350 characters per name and address elements, noting the current limitations with the CHES EIS field size of 180 characters for all elements of the registration details. A future requirement had been identified by ASX to potentially include 4 joint names. Further separation of the registration details picked upon themes from the CHES Replacement transfers and conversions working group where increased validation and removing current limitation are draft requirements.

A member sought clarification with regard to the 350 characters, and ASX confirmed it was 350 for each of name and address, 700 in total. A member from a share registry noted a few points for consideration. Firstly, the current field size permitted in CHES messaging was approaching the maximum limit of a printed mailing window, and if increased would pose an issue for mailing houses. The member noted that while further structure was of interest, questioned what was the problem being resolved. This would create costs from redevelopment, cleansing and so on. The member who attended the transfers and conversions working group didn't see separation and further validation as necessarily the solution to reconciliation issues related to the content of those fields. Further, the member wasn't aware of the requirement for additional names, and that issuers had limitations on names in their constitutions. The member also asked about other holder information like bank account, TFN, email elements and that these would be useful at the point of registration.

The Analyst noted that the adoption of ISO necessitated some new mandatory fields, at least separating name and address line. The Analyst further noted that ASX had not yet constrained the field size to something less than 350 characters but that could be done. The member noted that further discussion was needed. Another member asked if there had been any consideration given to separating mailing address from registration details. The Analyst confirmed this hadn't been considered in the mapping from EIS fields but could be considered as a potential requirement.

The member representing a registry also noted that only half of accounts have an email address so that limited a move to electronic notifications to holders. Another member asked if the use of registration details including email could be rationalised across the message set and products, noting some differences for mFund where some information was mandatory without related regulatory requirements and coverage.



A member asked if there was any investigation in the DLT solution to use more electronic methods in place of paper. The Chair noted that a move to remove paper was a clear requirement from the CHES Replacement working groups.

The Chair noted that the next step should be a broader than registration details engagement with registries and mailing houses on a bilateral basis to understand the ramifications, reporting back to the next meeting. **(Matters Arising 4, Action item 41)**

c) CHES EIS 421 – securities transformation

The ASX Senior Business Analyst provided an overview of a recommendation by ASX to withdraw the EIS 421 functionality (on/off holding balance adjustment), and instead utilize 2 x the EIS 425 – one to reduce, one to increase holdings associated with a corporate action, as outlined on slide number 17 of the ASX presentation. This was because the transformation method (2 x securities in the same message) was not ISO compliant. A member representing a registry noted that this could double message volumes, particularly on mornings of a corporate action (e.g. for Medibank this could be 200,000 instead of 100,000 messages). The member also noted that based on current fee regime the issuer fees could double. The member provided statistics to the committee, noting that for their organisation approximately 60% EIS 421 used at completion of DvP and 40% EIS 425 used for retail transactions.

Another member noted that for a custodian they would like to see this usage expanded, where full confirmation of the movements would fit with business requirements drafted by the CHES Replacement working group.

The Analyst noted that there was a natural tension between the ISO best practice and implementation decisions between a single message with supplementary data or 2 related messages.

A member agreed that we should aspire to best practice, but we also knew that ISO didn't necessarily cater for the registry processes present in Australia so it was going to be a stretch.

Another member asked if the ASX recommendation would always provide both messages and how would a user know the transaction was complete. The Analyst confirmed that appropriate ack, nacks and linkages would be part of the process.

The Chair asked if it would be worthwhile to further consult with registries on this matter. The Analyst noted that it would be useful to understand registry statistics and motivations. The Chair confirmed that ASX would engage offline with share registries to further discuss the current process and recommendation. **(Matters Arising 5, Action item 42)**

d) Achieving ISO 20022 compliance

The ASX Senior Business Analyst provided an overview of ASX's process with SWIFT for ensuring the best practice adoption of ISO 20022, given there was no formal certification process, as outlined on page number 18 of the ASX presentation. CHES EIS mapping to ISO 20022 was a good fit most of the time, and if not this would be flagged as an issue by the ASX team and with the committee. The Analyst emphasised that actions such as removing optional non-mandatory elements in a message, or referencing proprietary code lists was permitted, as was the use of supplementary data if the purpose of the data and

process was in line with the intended usage of that message. Two uses were made in relation to supplementary data – as an interim measure while seeking a formal change request to the message, or to extend the base message for a local market practice that wouldn't be a candidate for a change request.

Referring to slide numbers 19 and 20, the Analyst provided statistics relevant to the first 130 CHES EIS messages mapped to ISO in relation to the complete fit to the base messages (67%), and the use of supplementary elements, where 19% of the mapped messages only required 1 additional supplementary data element. The Analyst spoke of her comparative experience in adopting ISO 20022 in Brazil where the mapping was more problematic with a higher use of supplementary data. The Australian CHES EIS messages were well structured and well suited to ISO 20022 mapping. The Chair suggested the overview was worthwhile to provide a market context and that supplementary data was supported in the message set. It was noted that the number of new message candidates was low and would continue to be re-tested with the guidance of the SWIFT consultants. ASX proposed to include a discussion on the new message set and design process at the next meeting, noting that by registering these messages we would be contributing to the international standard with positive outcomes.

The ASX provided 2 examples on slide numbers 21 and 22 of message design considerations that challenged the best practice model. In some cases the ISO 20022 standard could imply the splitting of an EIS message into 2 separate messages to achieve a business transaction. For example, an EIS 022 Effected Holding Adjustment contains both quantity and balance – the equivalent ISO 20022 message does not. The choice for the committee was whether to keep 1:1 mapping to EIS including all data and therefore use supplementary data (extending the purpose of the ISO message, and therefore wouldn't be a change request that the Securities Evaluation Group would approve), or to follow ISO best practice and provide the quantity and balance in two separate messages. The ASX recommendation was to maintain the 1:1 mapping with CHES EIS, allowing for implementation considerations and lower complexity.

The second example provided an overview of a case where CHES messages provide notification of both previous and revised information in the sample message (e.g. EIS 128 and EIS 192). The equivalent ISO 20022 message only provided for revised values. The ASX recommendation was again to maintain 1:1 mapping with EIS and use supplementary data, again extending the purpose of the message. To apply best practice we would need to trim the message and rely upon look ups to related messages to achieve reconciliation.

The Chair noted that ASX was not necessarily seeking approval at this meeting and would allow members time to consider the options and provide feedback. There was a clear trade off vs. 1:1 mapping vs best practice adoption.

A representative from SWIFT noted that other market infrastructures like DTCC and SGX did use supplementary data and that it was not unusual in implementations. Noting that implementation should be conscious of not going against the intention of the message, but to use a pragmatic approach. Global standards do allow for global interoperability though.

A member noted that the balance information was very useful for reconciliation. The Chair agreed that we didn't want to lose the benefits associated with this information and that perhaps Australia was ahead of the global curve in some areas. We should recognise that our market does have unique and attractive features. Another member agreed that not every market is the same, and we should respect the Australian market is different and carry forward the good functionality.



e) Usage guidelines for review

The Chair asked members to consider the information on slide number 23 in their own time. The ASX Senior Business Analyst has earlier noted New Usage Guidelines were being published for Conversion, Part Settlement and some demand Transfer events – 10 in all.

Agenda item 7: Next meeting

The Chair summarised the key action items from the meeting and noted that draft minutes from the meeting would be circulated to members for review.

The Chair confirmed that the next meeting would be held on Tuesday 10 October in Sydney, and otherwise by webinar. Details would be provided to members.

The Chair noted the planned agenda for the 10 October meeting as outlined on slide number 30 of the ASX presentation, including a list of the usage guidelines to be published by ASX for review by committee members (per Agenda item 6e).

The Chair also proposed that the meeting scheduled in November be held in Melbourne.

The Chair thanked members for their input, and for participating in the meeting. The meeting closed at 5.05pm.

Signed as a correct record of the meeting.

A handwritten signature in blue ink, appearing to be 'A. Smith', written over a horizontal line.

Technical Committee Chair

A handwritten date in blue ink, '22 SEPTEMBER 2017', written over a horizontal line.

Date

ACTION ITEMS

No.	Meeting Date	Open Action Items	Owner	Due Date
17	14 March 2017	Provide further information on party identification for issuers – UIC or BIC and proposed process.	ASX	10 October 2017
19	2 May 2017	Provide sample of demonstration of comparison between ISO 20022 and ISO 15022 messages.	Scott Oakland, JPM	On hold
20	2 May 2017	Provide details of a proposed plan including potential topics for the remaining training webinars for feedback, standard training provided by SWIFT, and including identification of business vs. technical topics.	ASX	On hold
23	2 May 2017	Further review of the ASX CHES demand reporting summary and responses to questions contained in that summary. ASX to continue review of reports and provide further candidates for descope at meetings.	Members / ASX	10 October 2017
37	18 July 2017	Provide comparisons to other market implementations of transaction ids.	ASX, SWIFT	22 August 2017
38	22 Aug 2017	Review consistency of the application of UTC date, date and time, zulu format, and add item to upstream/downstream considerations log re the use of UTC for Trade Date confirmations from AMOs (with flow on impact to EIS 164 equivalent).	ASX	10 October 2017
39	22 Aug 2017	Chair to contact members seeking feedback on the approach of the Technical Committee, any suggestions to improve the process.	ASX	10 October 2017
40	22 Aug 2017	Provide list of CHES EIS messages in scope for detailed mapping during 2 nd half of 2017, including identification of descoped messages.	ASX	10 October 2017
41	22 Aug 2017	Conduct bilateral discussions with share registries and mailing houses regarding structuring of registration details and associated static data.	ASX	10 October 2017
42	22 Aug 2017	Conduct bilateral discussions with share registries regarding current holding balance	ASX	10 October 2017



No.	Meeting Date	Open Action Items	Owner	Due Date
		changes associated with corporate actions and proposed withdrawal of EIS 421.		

No.	Meeting Date	Closed Action Items	Owner	Closed Date
1	13 December 2016	Amend the Charter to reflect that the Chair "will" (instead of "may") forward copies of the minutes to the Business Committee for endorsement. ASX to publish and distribute final Charter.	ASX	13 December 2016
2	13 December 2016	Provide members with information on how to access SWIFT MyStandards.	ASX	14 March 2017
3	13 December 2016	Provide members with an overview of ISO 20022 training options.	ASX/SWIFT	7 February 2017
4	7 February 2017	Provide members with list of current scope of messages for detailed mapping during first half 2017.	ASX	14 March 2017
5	7 February 2017	Schedule training webinar for the attendance by members and seek and review feedback after the initial webinar.	ASX / SWIFT	14 March 2017
6	7 February 2017	Add link to relevant ISO 20022 information websites to the CHES Replacement web page.	ASX	14 March 2017
7	7 February 2017	Provide more details on access to online education available at swift.com.	SWIFT	14 March 2017
8	7 February 2017	Provide members with the current list of Market Identification Codes (MICs)	ASX	14 March 2017
9	7 February 2017	Provide members with more information on the use of BIC vs. UIC as the party identification code.	ASX / SWIFT	14 March 2017
10	7 February 2017	Market Operators to advise the preferred MIC to be presented in trade related messages as the "Place of Trade".	ASX, Chi-X, NSX, SSX	6 June 2017
11	7 February 2017	ASX to conduct analysis on whether the identification of a financial instrument is a fixed value or true value of the proprietary code issuer.	ASX	14 March 2017

No.	Meeting Date	Closed Action Items	Owner	Closed Date
12	7 February 2017	Provide list of proposed code (i.e. condition or BOM) in ISO 20022 format (4 character) mapped against CHES codes.	ASX	14 March 2017
13	7 February 2017	Add a general CHES Replacement update to the standing agenda for meetings.	ASX	14 March 2017
14	7 February 2017	Check the next Technical Committee meeting date planned for March and advise members of any change.	ASX	14 March 2017
15	14 March 2017	Schedule future agenda item to discuss transition arrangements, including any changed values (e.g. party identifiers).	ASX	2 May 2017
16	14 March 2017	Create register of matters that may impact upstream, downstream systems or processes, including codes, identifiers and ISO 15022.	ASX	2 May 2017
18	14 March 2017	ASX to draft procedures for change requests to usage guidelines and code lists.	ASX	2 May 2017
21	2 May 2017	Provide a list of standard training topics to share. Noted this action item is combined with action item 20.	SWIFT	6 June 2017
22	2 May 2017	Provide members with a copy of the presentation material from the trial training webinar held on 27 April 2017.	ASX	6 June 2017
24	2 May 2017	Resolve issue with Comments function on MyStandards and advise members when fixed.	ASX/SWIFT	6 June 2017
25	2 May 2017	Provide samples of the proposed consolidation and rationalisation scenarios for EIS 138 and EIS 134.	ASX	6 June 2017
26	2 May 2017	Provide proposal to broaden the engagement and method to seek feedback on key concepts such as consolidation/rationalisation.	ASX	6 June 2017
27	6 June 2017	Publish list of comments received on MyStandards with ASX responses regularly, around the time of each meeting.	ASX	18 July 2017
28	6 June 2017	Re-publish ISO 20022 equivalent of EIS 138 with corrected default value INFO for issuer of financial instrument code.	ASX	18 July 2017
29	6 June 2017	Review EIS 102 mapped equivalent message with Scott Oakland, JPM – optional inclusion of HIN.	ASX	18 July 2017
33	6 June 2017	Provide a presentation of CHES EIS mapping to ISO 20022, and typical ISO 20022 flows to assist committee discussion of key topics (e.g.	ASX	18 July 2017



No.	Meeting Date	Closed Action Items	Owner	Closed Date
		rationalisation, consolidation, descope of certain processes like allegement modify). ASX would also seek input from key members about the best process going forward.		
34	6 June 2017	Add the overview of transaction ids to the July meeting agenda.	ASX	18 July 2017
31	6 June 2017	Sample consolidated (EIS 138) and rationalised (EIS 138 and 134) messages published in the MyStandards community – in a separate collection “Sample Message Review”. Members to review and provide further comments via MyStandards, email.	Members	22 August 2017
32	6 June 2017	For Cancel/Correct & Modify, ASX recommendation revised to only do cancel/correct for bilateral modifications (and not allow modify – removal of EIS 121). ASX to contact users of EIS 121, and action remains open until all members confirmed their agreement with the recommendation.	ASX, Members	22 August 2017
30	6 June 2017	Obtain international usage comparisons on the use of UTC time format. Members to provide input from international offices where possible.	ASX, members	22 August 2017
35	18 July 2017	ASX to publish all final draft usage guidelines in MyStandards and highlight to members those usage guidelines that need their review. SWIFT to advise if a flag is available in MyStandards to indicate particular review items.	ASX, SWIFT	22 August 2017
36	18 July 2017	Provide members with details of feature in MyStandards to affirm a comment.	ASX, SWIFT	22 August 2017

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 5A	
Topic	Minutes from 3 August 2017 Business Committee Meeting
Date	11 October 2017
Purpose of this paper	To provide Business Committee members with the minutes and Business Committee report to the ASX Boards from the 3 August 2017 meeting.

OVERVIEW

Draft minutes and the draft report to the Boards of ASX Clear and ASX Settlement from the 3 August 2017 Business Committee meeting were emailed to all members of the Business Committee on 23 August 2017 for comments by 30 August 2017. The Secretariat did not receive any substantive comments from members.

The Business Committee report and minutes will be formally presented to the next meeting of the ASX Clear and ASX Settlement Boards.

ATTACHMENTS

Attachment A – Business Committee Report and Minutes from the 3 August 2017 Meeting.



BUSINESS COMMITTEE REPORT TO THE BOARDS OF ASX CLEAR AND ASX SETTLEMENT

BUSINESS COMMITTEE MEETING

At its 3 August 2017 meeting, the Business Committee was updated on the:

- operating performance of CHES for the June Quarter 2017;
- corporate action working group's inputs to business requirements for CHES replacement;
- proposed timeframe and arrangements for Corporate Action STP Phase 2;
- timeline for incorporating stakeholder input into the consideration of CHES replacement; and
- Technical Committee's progress in mapping CHES messages to the ISO20022 message standards.

BUSINESS COMMITTEE RECOMMENDATIONS TO THE ASX CLEARING AND SETTLEMENT BOARDS

The Committee requested ASX management present to the Boards a recommendation that representatives of approved market operators (AMOs) be invited to future CHES replacement working groups.

KEY ISSUES DISCUSSED

The Committee discussed outputs from the corporate action working group, noting the 8+ business requirement inputs which will emerge. It was noted that some issues, such as cum entitlement balances and deferred settlement trading would be considered further in subsequent working groups. There was also a discussion about membership of the working groups, particularly around AMO attendance.

The Committee was briefed on the proposal to create a new Corporate Action STP Phase Two working group, involving a range of interested stakeholders, in 2018 to investigate the scope for a range of efficiencies.

There was discussion about the CHES replacement matters that will be covered in the final two Business Committee meetings this year – a high level assessment of a DLT-based solution and a prioritisation of the business requirements for the new system coming out of the working group processes.

AGREED ACTIONS

1. That the recommendation on AMO invitations to the CHES replacement working groups be submitted to the Boards as a recommendation of the Business Committee.
2. ASX will establish a new working group in early 2018 to progress work on Corporate Action STP Phase 2.
3. ASX will provide a report to the October Business Committee meetings on the high-level assessment of DLT technology and a report to the November meeting on the prioritisation of day one business requirements for CHES replacement.

Minutes from the meeting are attached.



MINUTES

BUSINESS COMMITTEE MEETING

Date	Time	Location
Thursday , 3 August 2017	12.00pm – 2.00pm	ASX Offices – Level 1, 20 Bridge Street, Sydney

Agenda Item	
1.	Introduction
2.	Service and Financial Performance a) Operating Performance Report
3.	Clearing and Settlement Infrastructure a) CHES Replacement – Business Requirement Working Groups b) Corporate Action STP – Phase 2 c) CHES replacement process d) Technical Committee Report
4.	Administration a) Minutes from the 4 May 2017 meeting b) Forward work program c) Other matters

NEXT MEETING: Wednesday 4 October 2017



Members		
Company	Name	Job Title
ABN AMRO Clearing	Barry Parker	Chief Executive Officer
AFMA	David Lynch	Chief Executive Officer
ANZ	Andrew Koudrin (delegate)	Head of Execution Assurance and Middle Office
ASX	Peter Hiom	Business Committee Chair Deputy CEO, ASX
Bank of America Merrill Lynch	Mr Rhys Cahill	Global Markets COO
Bell Potter Securities	Dean Surkitt	Managing Director Retail
BNP Paribas	Luc Renard	Head of Clearing & Custody
Chi-X Australia	Mike Aikins	Chief Operating Officer
Citi	Miles O'Connor	Director, Direct Custody & Clearing Securities & Funds Services
Commonwealth Bank of Australia	Sheridan Thompson	Head of Strategic Development, CommSec
Credit Suisse	Winston Loke	Australian Equities COO
Deutsche Bank AG	Geoffrey Plaisted	Chief Operating Officer, Equities
Goldman Sachs	Jeremy Follett	Executive Director Operations
J.P. Morgan	Steve Hacker(delegate)	Markets Operations
Macquarie Group	James Indge	Cash Equities Business Manager
Morgans	Daniel Spokes (delegate)	Manager, Transactional Services & Settlement Systems
Morgan Stanley	Craig McGuire	Head of Operations
NSX	Ann Bowering	Managing Director
Pershing Securities	Rob Forbes	Chief Executive Officer
Stockbrokers & Financial Advisers	Andrew Green	Chief Executive Officer
Sydney Stock Exchange	Geoff Williams	Chief Executive Officer
UBS	Conor Foley	Chief Operating Officer

Apologies: Peter Snodgrass (HSBC), Nathan Walsh (NAB)



ASX Management	
Name	Job Title
Tim Hogben	Chief Operating Officer
Hamish Treleaven	Chief Risk Officer
Eloise Wett	Executive General Manager, Operations
Daniel Moran	Acting Group General Counsel & Company Secretary
Cliff Richards	General Manager, Equity Post Trade
Nick Wiley	Deputy General Counsel, Post-Trade
Diane Lewis	Senior Manager, Regulatory and Public Policy
Gary Hobourn	Senior Economic Analyst, Regulatory & Public Policy
Rodd Kingham	Senior Manager, Equity Post Trade Services
Karen Webb	Manager, Equity Post Trade Services



AGENDA ITEM 1: INTRODUCTION

The Chair welcomed members and delegates to the fourth meeting of the year and noted that prior to the meeting apologies had been received from Nathan Walsh (National Australia Bank) and Peter Snodgrass (HSBC). There were also a number of delegates representing members who were unable to attend: Andrew Koudrin (ANZ); Geoff Williams (SSX); Steve Hackers (JP Morgan); and Daniel Spokes (Morgans).

AGENDA ITEM 2: SERVICE PERFORMANCE

a) Operating Performance Report

The ASX Executive General Manager, Operations spoke to the June quarter performance report noting that:

- Availability across CHES and the TAS was 100% for the period.
- ASX (+6.5%), Chi-X (+17%), and NSX (+13%) saw increases in the number of trades processed through the settlement facility compared to the March quarter, while there was a decline in SSX settlement activity.
- Overall trade value (on and off-market) increased 9.7% to a daily average traded of \$6.5bn.
- Daily average cleared value rose from \$4.5bn to \$4.9bn with netted value up from \$1.74bn to \$1.92bn. Netting efficiency was steady at 99.92% on volume and 61% on value.
- The average daily settlement value was \$9.9 billion, up from \$9.2 billion previously.
- ASX had a dozen trade rejections and Chi-X had none in the period.
- Failed trade rates remained very low around 0.3% for the period, marginally higher than the March quarter. This equated to around 260 fails a day out of 80,000 settlements.
- There were no extensions to the batch settlement cut-off time during the quarter.
- Daily average cash market margin was \$168m over the quarter, with a high of \$342m on 16 June.
- There were no instances of delays in margin payments during the quarter.
- There were 3,500 transactions (up 19%) worth \$103m (up 51%) through the mFund service in the quarter.

Members had no questions on the performance report

AGENDA ITEM 3: CLEARING AND SETTLEMENT INFRASTRUCTURE

a) Business requirements working groups

The Executive General Manager Equity Post-Trade noted that the work of the corporate actions working group was largely completed following the last of the five two-hour sessions. Eight high-level business requirements have been identified so far (set out in the Business Committee papers) and there are additional requirements that still need to be reviewed by members.

The primary themes coming out of the corporate action working group were the high priority to be afforded to: errors and duplication of processes; the lack of standard processes in some areas and mandatory electronic communication channels.



The last two sessions focused on a few topics in detail, including cum entitlement balances and deferred settlement.

On cum entitlement balance treatment a number of matters were identified in the working group and these will be considered further. The working group discussion highlighted that different stakeholders (e.g. institutional and retail participants, issuers, investors, share registries and custodians) have different viewpoints. A participant member noted that while he acknowledged there are different views on cum entitlements, he wanted to emphasise the importance of protecting retail investors' interests and supported their retention. Another participant member stated that his organisation supported removing cum entitlement balances.

The Executive General Manager, Post Trade responded that investor protection will be front of mind as these issues are worked through in more detail.

Discussion around deferred settlement trading was touched on briefly in the corporate action working group but the topic will be moved to the settlements working group for more detailed consideration.

Non-ASX AMO representatives objected to not being invited to participate in the corporate action working group (despite making requests to join) as they believed the content being discussed is relevant to their issuers and participants. They expressed the view that the separate AMO working group established by ASX to gather their input was ineffective and they did not feel that they had equal access to contribute to the development of requirements across the market or to hear the views of all other participants about corporate action processes.

The Deputy General Counsel, Post-Trade responded that the separate AMO working group was established to consult on a wide range of AMO clearing and settlement arrangements that are probably not relevant to the broader working group audience. He noted that if there was a concern that insufficient time has been scheduled for these meetings then additional time can be allocated to feed AMO views into the business requirement inputs. He noted AMOs already have access to all of the CHES working group material and are able to use it to consult with their issuers and participants to feed back into the AMO working group.

In response to the discussion, a member proposed the Committee recommend to the ASX clearing and settlement boards that AMOs should be invited to all working groups going forward. The Chair sought the views of members and there was a broad consensus that this recommendation be put to the relevant ASX Boards. **[Action Item 1]**

The Chair asked if there were any observations members wanted to raise in relation to transfers and conversions, the subject of the next working group given it will be another complex and controversial issue. It was noted that two meetings of the working group are currently scheduled.

No member raised any issues.

A member asked about the prospects of achieving a standardised notification of corporate action events through mandating listed entities to provide information in a standard, automated process that can be passed through to participants, custodians, and any other users.

The Executive General Manager, Post-Trade noted that a pre-condition to achieving this outcome would be extensive consultation with (and support from) issuers, regulators and other industry stakeholders as



occurred with the original corporate actions STP project. That said the aim will be to drive out as much manual processing as possible through end-to-end STP processing.

b) Corporate Action STP – Phase 2

The Manager, Equity Post-Trade provided a brief overview of the earlier phases of the corporate action STP project.

The phase one initiative went live in September 2014 covering the highest volume corporate events (dividends, return of capital cash, reconstructions and interest payments) based on mandated standard timetables. Around 97% of those corporate action events (with limited exceptions for ETF issuers) are announced by the STP process. Further STP efficiencies were implemented in 2015.

STP requires standardised information to create or update an event in the central database which is then pushed out through ASX's reference point or ISO 20022 product. The complete STP process currently takes about 5-8 seconds.

The Business Committee has previously discussed the scope for STP phase two, focusing on the five next most significant corporate actions relating to capital raising.

There are clear synergies between the matters being discussed in CHES replacement working groups and corporate actions STP. For example, many of the same people across the industry would work on both projects. There is also information coming through the CHES replacement working groups that can feed into the scoping information for STP.

Building on the previous Business Committee priorities, ASX anticipates expanding STP phase 2 to cover all the events that ASX currently supports.

The working group discussed whether it was possible to provide STP support for other events such as elections, payment distributions, etc. but some of those matters are not currently within scope for STP. However, some actions have been taken offline to look at whether there's an appetite for, and value in, ASX moving into services that support of activities such as proxy voting.

STP phase 2 will focus on capital raising announcements (rights issues, bonus issues and other capital raisings), including the request for quotation of additional securities (Appendix 3B). The business requirement would be to STP from the announcement through to the quotation process for those additional securities.

It was stressed that any changes in these processes would need to be subject to significant stakeholder engagement and regulatory approval processes. Significant consultation with issuers was undertaken during STP phase one, including through a working group involving around 30 issuer representatives, where there was an exchange of views between issuers and participants/other users of the corporate action information.

The Executive General Manager Post-Trade noted that issuers are already represented in the corporate action working group by the Governance Institute of Australia, the Australian Investor Relations Association and share registries. There has already been feedback around the impact on issuers of any changes.



The Deputy General Counsel, Post-Trade noted that at the last AMO working group meeting, ASX initiated a conversation about how the benefits of STP might also be extended to other listing venues.

ASX will convene a working group to move forward with discussing STP phase two. This group would draw on the existing corporate action working group members expanded to include other key stakeholders. There has been feedback from stakeholders that the high resource requirements associated with the existing working groups and ISO 20022 technical committee means there is little appetite for another working group process before the end of this year. A new working group would commence early next year and it is expected the whole project would run for 18-24 months. **[Action Item 2]**

The Chair asked members about the scope of the STP project and whether they had any observations around timing issues that should be considered as ASX develops a more detailed work program.

Members raised no issues.

c) **CHES replacement process**

The Executive General Manager Post-Trade noted there are two key elements to CHES replacement and these would be the subject to discussions at the October and November Business Committee meetings. **[Action Item 3]**

The first element is whether to proceed with distributed ledger technology. In reaching this decision ASX and its technology partner is building a core set of requirements and then testing them in a production-like environment. There are three key criteria in assessing the technology:

- does it have the functional capability to model business problems and solve them?;
- does it meet all the non-functional requirements such as its redundancy characteristics, speed of throughput, how many transactions can be processed per unit of time and security (cybersecurity and privacy)?; and
- is the software provider able to produce high quality software and do it in a predictable, repeatable fashion?

In October, ASX will present the Business Committee with a summary of the information used to assess DLT against the three criteria set out above and, subject to availability, the high-level findings from a third-party assessment of the architectural security of the technology.

A member asked if the third-party review of the technology could be extended to examine the economics of the technology investment decision, including comparisons with alternative off-the-shelf technology. The Chair responded that the Board's investment decisions include commercial-in-confidence matters between ASX and its software vendor and would not be disclosed.

A member asked questions around the software agreements between ASX and Digital Asset (DA), the structure of the proposed DLT solution and what that implies for user connectivity options and the assessment of security characteristics. The Chair stated that any questions going to contractual arrangements between ASX and DA were commercially confidential. He also noted that while decisions on the final structure of the solution had not yet been taken, ASX will assess a range of permutations that would enable ASX to assess the security characteristics of any proposed DLT solution. The Executive General Manager, Post-Trade noted that any replacement system would maintain a centralised message-



based architecture so that users could continue to connect as they do today, but through ISO-based messages.

A member asked for an update on the progress in assessing the technology. The Executive General Manager, Post-Trade noted that the assessment was on-track, although much of the heavy lifting is back-ended in the process. The process for working with our software partner to produce code has been going well and the analysis of both the functional and non-functional aspects is promising but more intensive development and testing will occur over coming months.

The second element is the functional scope of what the system will do in its first release. The new contemporary technology will also facilitate subsequent change in a lower risk, lower-cost fashion than the existing CHES system.

In addition to the consultation underway (including six working groups and the ISO 20022 Technical Committee) the November Business Committee will be asked to provide its input on the prioritisation of the business requirements coming out of each working group. Following the completion of the fifth working group, all attendees from the working groups will be asked to indicate their priorities amongst all the requirements. These will then be pulled together and ASX will share that at the November meeting for review. That meeting will also receive a paper summarising ASX's business requirements on clearing, settlement and some other post-trade services and the outputs of the ISO 20022 Technical Committee.

A member asked if the papers for the October and November meetings could be distributed well in advance to allow time for members to digest the material. The Chair indicated that ASX would try and give as much notice as possible.

A member sought clarification on what the Business Committee is expected to reach conclusive decisions at the October and November meeting? In particular, if ASX will be seeking an endorsement from the Committee? He thought that this would be problematic.

The Chair responded that the October meeting is more an information sharing session on the assessment of DLT. In November, the Business Committee will have an opportunity to provide their views on the prioritisation of the functional requirements and, if necessary, make recommendations on those priorities to our clearing and settlement board.

A member asked if at the end of the working group processes the outputs will be subject to a further round of public consultation to enable others to contribute to the process. The Chair indicated that ASX is considering the best way to collect input from stakeholders not represented on the Business Committee to ensure that a broader group have the opportunity input on the day one business requirements.

A member asked for any guidance that could be provided to assist participants with planning their technology budgets into next year?

The Executive General Manager, Post-Trade acknowledged the importance of users having adequate information and lead times to plan resourcing. He indicated that when the day one scope is announced a technology plan with indicative milestones will be released. The precise timing will be dependent on the feedback received from users on the transitional period they require. He suggested that users may need to budget for some analyst and project resources to commence planning work next year with the main work likely to occur between 2019 and 2021.



d) Technical Committee Report

The ASX Chief Operating Officer reminded members that there had been a discussion at the last Business Committee meeting of the 6 June Technical Committee meeting. He noted that a subsequent Technical Committee meeting was held on 18 July focused on:

- what CHES messages could be removed from the new ISO message suite, for example reporting messages that have been used very rarely, if at all, over the past couple of years;
- the ability for users to opt in or out of receiving some messages that are not relevant to their business operations. Further consideration of this matter will be referred back to one of the working groups;
- an agreement to adopt a single date and time format based on coordinated universal time (UTC), consistent with the New Payments Platform in Australia and T2S in Europe; and
- bespoke functionality that CHES messages cater for that aren't undertaken globally and if industry wants to lobby the ISO Standards Committee for registration as a global standard.

AGENDA ITEM 4: ADMINISTRATION

a) Forward work program updated

The Committee noted the forward work program and the Chair reminded members to advise ASX if they had any additional items for the program.

b) Minutes from the 22 June 2017 meeting

The minutes of the 22 June meeting were approved without change.

c) Other matters

None

NEXT MEETING

The next meeting is scheduled to be held on Wednesday, 4th October 2017.

The meeting closed at 1.40pm.

Signed as a correct record of the meeting.

Chairman

Date

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 5B	
Topic	Forward Work Program
Date	11 October 2017
Purpose of this paper	To update Members on the forward work program of the Business Committee for 2017.

OVERVIEW

The forward work program of the Business Committee for calendar year 2017 is provided in Attachment A. Attachment B outlines the forward work program for the Technical Committee on CHES Messaging and ISO 20022 from December 2016 to November 2017.

The forward work program largely reflects the various work streams associated with CHES replacement.

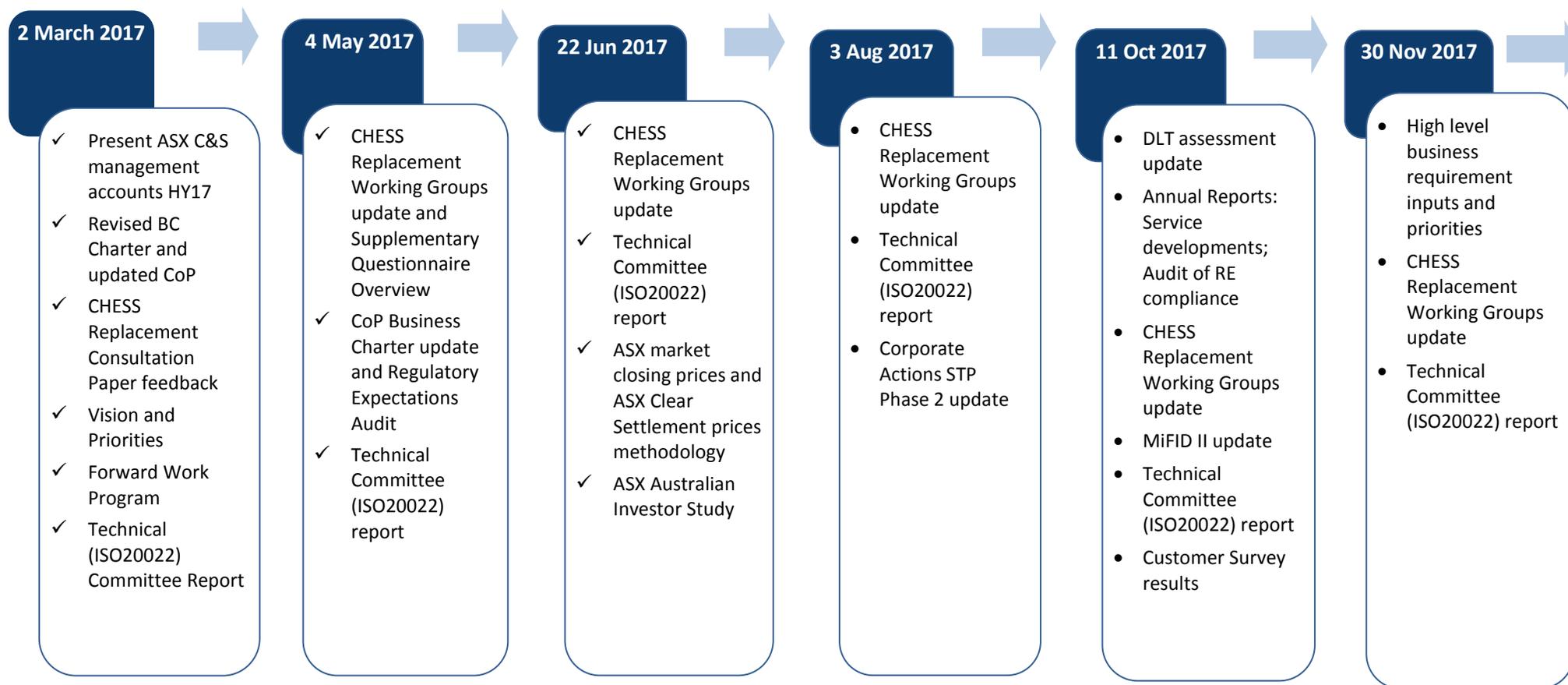
Members of the Business Committee are invited to provide feedback on, or suggest topics for inclusion in, the forward work program for 2017 and 2018. Business Committee Members are able to suggest additional items for the forward work program at any time by contacting the Business Committee Secretariat.

ATTACHMENTS

Attachment A: Business Committee 2017 Forward Work Program

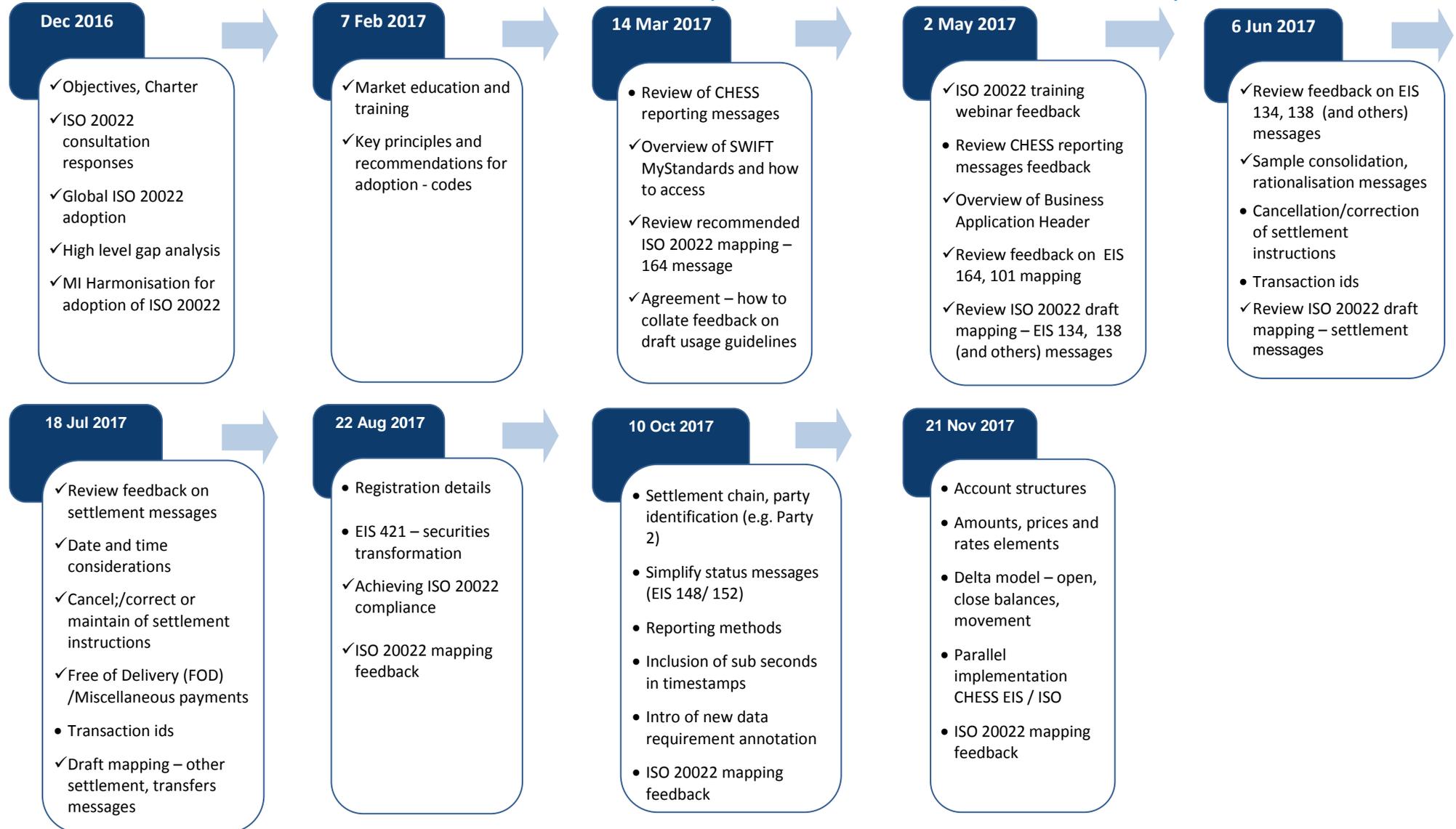
Attachment B: Technical Committee on CHES Messaging and ISO 20022 Forward Work Program

ATTACHMENT A: BUSINESS COMMITTEE 2017 FORWARD WORK PROGRAM



Note: the forward work program does not include the standing agenda items for each meeting.

ATTACHMENT B: TECHNICAL COMMITTEE ON ISO 20022 FORWARD WORK PLAN (MATTERS FOR CONSIDERATION @10 OCTOBER 2017)



Note: Items with a 'tick' have been discussed and all actions have been completed. Items from previous meetings that do not have a 'tick' have been discussed, but there are outstanding actions. The Forward Work Program is an evolving document and is presented above as at October 2017.